UNDERSTANDING THE MALLEABILITY OF IMPLICIT STEREOTYPING AND IMPLICIT PREJUDICE TOWARD FEMALE LEADERSHIP: A LONGITUDINAL FIELD STUDY ON MUNICIPALITY EMPLOYEES IN TURKEY

by

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UNDERSTANDING THE MALLEABILITY OF IMPLICIT STEREOTYPING AND IMPLICIT PREJUDICE TOWARD FEMALE LEADERSHIP: A LONGITUDINAL FIELD STUDY ON MUNICIPILATY EMPLOYEES IN TURKEY

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ABSTRACT

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Keywords: *Female leadership, implicit attitude, municipality mayor, latent growth modeling, longitudinal study*

The widespread underrepresentation of women in senior leadership positions and discrimination against them has been mostly explained using socio-cognitive processes, such as stereotypic and prejudicial attitudes against women's leadership. Any reduction in such unfavorable attitudes of employees seems to be necessary before we can see more gender balance in senior leadership. There are divergent theories and contradicting results on how malleable stereotypes and prejudices toward women management are especially for their implicit (i.e. automatic, sub-conscious, uncontrollable and unintentional) components. The present study aims to examine the malleability of the implicit stereotypic and prejudicial attitudes toward female leadership. I consider dynamic views of role congruity theory and implicit leadership theories as well as divergent theories on the malleability of stereotypes and prejudice, namely intergroup contact theory, the associative-propositional evaluation model and the backlash effect arguments. I investigate the presence and extent of change (alpha or gamma change) in implicit attitudes toward female leadership of employees following exposure to a female leader at work. I conducted a three-phase (three-month

interval) longitudinal field study in the municipality context. Longitudinal data were collected from civil servants of metropolitan district municipalities which had a woman mayor for the first time in their history (n = 147, 46.3% females) and those with male municipality mayors (n = 160, 56.7% females). The results suggest no significant overall difference in implicit stereotyping or the change trajectory of implicit prejudice toward female leadership (via latent growth modelling) following exposure to a female leader. Participant gender, female leader's perceived characteristics (i.e., success & agency/communality) as well as employees' perceived quantity and quality of interaction with the female mayor significantly moderated the exposure's influence over implicit stereotyping and implicit prejudice. I discuss the implications of this study on contradicting theoretical explanations concerning the malleability of implicit attitudes toward female leadership as well as dynamic arguments of leadership theories.

ÖZET

KADIN LİDERLİĞİNE KARŞI ÖRTÜK KALIP DÜŞÜNCELERİN VE ÖRTÜK ÖNYARGILARIN DEĞİŞEBİLİRLİĞİ: TÜRKİYE'DEKİ BELEDİYE ÇALIŞANLARI ÜZERİNE BOYLAMSAL BİR SAHA ÇALIŞMASI

UZAY DURAL ŞENOĞUZ

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Anahtar sözcükler: *Kadın liderliği, örtük önyargı, örtük kalıp düşünce, belediye başkanı, latent büyüme eğrisi, boylamsal çalışma*

Kadınların üst düzey liderlik pozisyonlarında daha az yer almasının ve kadın liderlerin ayrımcılık görmesinin en önemli nedenlerinden biri kadın liderliğine karşı kalıp düşünceler ve önyargılar gibi sosyal-bilişsel süreçlerdir. Üst düzey liderlik pozisyonlarında cinsiyet eşitliğini sağlayabilecek etmenlerden biri örtük düzeydeki (otomatik aktive olan, bilinç dışı ve istemsiz işleyen) kadın liderliğine karşı olumsuz tutumlarının azalmasıdır. Kadın yöneticiliğine karşı örtük kalıp düşüncelerin ve örtük önyargıların nasıl değişebileceğine dair ise farklı teoriler ve birbiri ile çelişen görgül bulgular mevcuttur. Bu çalışma kalıp düşüncelerin ve önyargıların örtük bileşenlerinin değişebilirliğini incelemeyi hedeflemektedir. Çalışma, rol uyumu teorisinin ve örtük liderlik teorilerinin dinamik yaklaşımları ile önyargıların değişebilirliğine dair (gruplararası temas kuramı, çağrışımsal-önermesel değerlendirmeler modeli ve geri tepme etkisi gibi) farklı teorileri değerlendirmektedir. Bu teoriler ışığında iş yerinde bir kadın lidere maruz kalmanın kadın liderliğine dair örtük tutumları değiştirip değiştirmediğini ve değiştirdiyse ne düzeyde değiştirdiğini (alfa değişimi veya gama değişimi) araştırmaktayım. Bunun için belediye bağlamında üç fazlı bir boylamsal çalışma yürüttüm. Araştırmaya büyükşehir ilçe belediyelerinde kadın belediye başkanı altında ilk defa çalışan memurlar (n = 147, % 46,3 kadın) ile erkek belediye başkanı

ile çalışan memurlar (n = 160, % 56,7 kadın) katıldı. Çalışanların örtük tutumlarını ve belediye başkanlığına dair değerlendirmelerini üç ay ara ile topladım. Latent büyüme modellemesi sonuçları bir kadın lidere maruz kalmanın örtük tutumların zamana bağlı değişimini tek başına anlamlı düzeyde yordamadığını göstermektedir. Katılımcının cinsiyeti, kadın liderin özellikleri (başarısı ve amillik-komünsellik) ve çalışanların kadın başkan ile etkileşimlerinin niteliği ve niceliği maruz kalma ile örtük tutumlardaki değişim arasındaki ilişkiyi düzenlemektedir. Bulgular, kadın liderliğine dair örtük tutumların değişebilirliğine dair birbiri ile çelişen teorik açıklamalara ve liderlik teorilerinin dinamik yaklaşımlarına ışık tutmaktadır.

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LIST OF ABBREVIATIONS

ABG	Alpha-Beta-Gamma Change
ANOVA	Analysis of Variance
ANCOVA	Analysis of Covariance
APE	Associative-Propositional Evaluation
BSRI	Bem Sex Role Inventory
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CI	Confidence Interval
EC	Evaluative Conditioning
EFA	Exploratory Factor Analysis
GL-IAT	Gender Leadership Implicit Association Test
ICC	Intra-class Coefficients
IJ	Interactional Justice
ILT	Implicit Leadership Theories
MI	Measurement Invariance
MLGM	Multiple-indicator Latent Growth Modeling
LMX	Leader-Member Exchange
P-IAT	Prejudice Implicit Association Test
RMSEA	Root Mean Square Error of Approximation
SEM	Structural Equation Modeling
SI	Structural Invariance
TLI	Tucker-Lewis Index

1.

INTRODUCTION

Women have been increasingly occupying positions of power in organizations, but they are still underrepresented in leadership roles (Davidson & Burke, 2004; World Economic Forum, 2014; 2015). The widespread underrepresentation of women in senior leadership positions and discrimination against them have been explained using socio-cognitive processes, such as stereotypic and prejudicial attitudes against women's leadership (Eagly & Diekman, 2005; Eagly & Karau, 2002; Heilman, 2001; Heilman & Eagly, 2008; Rudman, 2005; Rudman & Glick, 1999; 2001; Ryan & Haslam, 2007; Schein, 2001; Sümer, 2006; Weyer, 2007). *Attitude* is a subjective evaluation on entities and objects in the social environment (Allport, 1954/1979). *Stereotypic* attitude is the evaluation of a person based on his/her social groups' typical characteristics. Common stereotypic attitudes toward women reflect the association of women with subordinate roles/characteristics (Eagly & Karau, 2002; Rudman, 2005). *Prejudice* is about negative affective (e.g., antipathy) reactions against social groups. The disliking of women leaders and associating them with negativity reflect prejudice against women leaders (Eagly & Diekman, 2005; Eagly & Karau, 2002; Rudman, 2005). Implicit stereotypic and prejudicial attitudes capture psychologically deeper mechanisms of reluctance to associate leadership with women and negative evaluations of female leaders at work setting (Rudman, Ashmore & Gary, 2001; Rudman & Kilanski, 2000). Any reduction in such unfavorable attitudes of employees seems to be necessary before we can see more gender balance in senior leadership. Nevertheless, there are divergent theories and contradicting results on how malleable implicit forms of stereotypes and prejudices toward women management

are. The present study aimed to examine the question of the malleability implicit components of stereotypic and prejudicial attitudes toward female leadership, which involve automatic, sub-conscious, uncontrollable and unintentional evaluations (Greenwald & Banaji, 1995).

1.1.Importance of the Study & Theoretical Rationale

Implicit cognitions have non-negligible impact on employee preferences, choices, emotions and decision-making processes (Johnson & Saboe, 2010; Leavitt, Fong & Greenwald, 2011; Lord, Brown, Harvey & Hall, 2001; Ziegert & Hanges, 2005). Implicit form of leadership cognitions were found to determine employees' categorization of people as leaders or not, their evaluations of managers' success (Lord, Foti & de Vader, 1984; Lord et al., 2001) as well as their relationship with leaders (e.g., Epitropaki & Martin, 2005). Despite their importance, implicit cognitions of employees (Becker & Cropanzano, 2010) have not received adequate attention from organizational scholars. Researchers recommended a closer examination of implicit attitudes in order to refine theories about employees' stereotyping and prejudice (Becker & Cropanzano, 2010; Johnson & Saboe, 2010; Leavitt et al., 2011; Ziegert & Hanges, 2005).

The malleability of implicit stereotypes and implicit prejudices of employees is particularly neglected in management. This is partly because implicit cognitions at work are seen as static and enduring cognitive systems that are hard to suppress or change via interventions (Becker & Cropanzano, 2010; Payne & Gawronski, 2010). There is a call for studies on the malleability of employees' implicit attitudes, given that counter arguments and evidence are recently revealing their malleability (e.g., Asgari, Dasgupta, Cote & Gilbert, 2010; Beaman, Chattopadhyay, Duflo, Pande & Topalova, 2009; Bernstein, Young & Claypool, 2010; Blair, Ma & Lenton, 2001; Bosak & Diekman, 2010; Dasgupta & Asgari, 2004; Dasgupta & Rivera, 2008; Gawronski & Bodenhausen, 2006; Gregg, Seibt & Banaji, 2006; Lenton, Bruder & Sedikides, 2009). The present dissertation heeded these calls by taking a dynamic, follower centric and context-dependent leadership perspective.

The current focus on change in employees' attitudes toward women leaders can reveal how female leadership processes unfold from the perspective of followers. Leadership has been usually studied in terms of leaders' individual attributes, such as leader traits, characteristics and behaviors (Dinh & Lord, 2012). Recent leadership theories, however, describe leadership as an ongoing dynamic interrelation among diverse "loci" at work - i.e., leaders, followers, work context and time context (Eberly, Johnson, Hernandez & Avolio, 2013). Followers are people who are mutually influenced by the leader and influence him/her back (Uhl-Bien, Riggio, Lowe & Carsten, 2014). Leadership processes are seen as dynamically determined through followers' changing perceptions and attitudes about leaders (Dinh & Lord, 2012; Foti, Knee & Backert, 2008; Lord & Shondrick, 2011) within the work context (House, Hanges, Javidan, Dorfman & Gupta, 2004; Lord et al., 2001; Thomas, Martin, Epitropaki, Guillaume & Lee, 2013). Although the critical role of time in studying leadership has long been recognized (e.g., Lord et al., 2001), it has neglected in the organizational realm.

The present study can contribute to fill the gap by theorizing whether and under what conditions implicit attitudes toward women's leadership can change at work context and by testing the boundary conditions of dynamic views of leadership. Its basic assumptions are resided in the mechanisms of leadership perceptions in general suggested by the implicit leadership theories (ILTs; Dinh & Lord, 2012; Foti et al., 2008; Lord et al., 2001; Lord & Hall, 2003; Lord & Shondrick, 2011) and stereotypes/prejudice toward women's leadership in particular explained by role congruity theory (Eagly & Karau, 2002; Eagly & Diekman, 2005). Briefly, role congruity theory explains that the perceived mismatch between traditional gender roles and leadership roles lead people to a) not perceive women as leaders (stereotype) and b) have unfavorable feelings (prejudice) against women at the top positions. Contextual changes (e.g., societal transformations) might decrease the perceived mismatch of leadership roles versus gender roles, resulting in lower unfavorable attitudes against women's leadership over time (Diekman & Eagly, 2000; Deikman & Goodfriend, 2006; Duehr & Bono, 2006).

ILTs (Lord et al., 2001; Lord & Hall, 2003) explain that employees evaluate a target person as leader or not basing on the target person's match with the cognitive

schemata about leadership – leadership prototypes. Employees tend to associate leadership with men rather than women (Scott & Brown, 2006), because leadership prototypes often involve masculine and agentic leadership attributes (e.g., dynamism, power, authority, assertion) (Hogue & Lord, 2007). The dynamic view of ILTs claims that any change in the work context can transform leadership perceptions and therefore evaluations about leaders. To sum, people are stereotypic and prejudicial against women's leadership due to the perceived mismatch of female roles and leadership roles as argued by role congruity theory (Eagly & Diekman, 2005; Eagly & Karau, 2002) and one's mismatch with leadership prototypes as predicted by ILTs (Hogue & Lord, 2007). Dynamic perspectives of both theories emphasized the necessity of contextual transformations. Considering the mechanisms offered by these two follower centric leadership theories, I propose the first time exposure to women leaders as the basic predictor of change in employees' implicit attitudes toward female leadership.

Diverse theoretical perspectives have attempted to delineate the conditions under which implicit stereotypes and prejudice toward a group can potentially diminish or increase following the exposure to a member of a prejudiced group, such as women leaders (e.g., Eagly & Karau, 2002; Gawronski & Bodenhausen, 2006; 2011; Rudman, 2005; Rudman, Moss-Racusin, Phelan & Nauts, 2012). The main effect of exposure and contact with a member of the prejudiced group was originally explained intergroup contact theory in social psychology (Allport, 1954/1979; Pettigrew, 1998; Pettigrew & Tropp, 2006). Intergroup contact theory mainly argues that mere observation of members of prejudiced groups (mere exposure) can increase the familiarity of the prejudiced group and decrease prejudice over time. Past research supported the idea that stereotypic and prejudicial attitudes decrease following even brief exposure to figures who occupy positions against stereotypic beliefs (counter-stereotypic figures, such as women leaders) at a laboratory setting (e.g., Blair et al., 2001; Johnson, Murphy, Zewdie & Reichard, 2008; Rudman & Goodwin, 2004; Rudman & Kilanski, 2000). Given that a woman leader exemplifies a counter-stereotypic figure in most societies and organizations (Schein, 2001), I predict that exposure to a female leader at work can challenge implicit stereotypes and prejudice toward female leadership.

The original arguments of Allport (1954/1979) emphasize that a longer contact with a counter-stereotypic member can optimally enable pleasing experiences with him/her, decrease anxiety about his/her social group and therefore diminish prejudice against the group over time. At implicit level, a theory in socio-cognitive psychology - Associative-Propositional Evaluation (APE) model (Gawronski & Bodenhausen, 2006; 2011; Gawronski & Sritharan, 2010; Rydell & Gawronski, 2009) - similarly posits that cumulative long-term pleasant experiences with target entities can reduce implicit prejudice. I similarly suggest that pleasant subjective experiences with women leaders and/or the observation of their successful managerial performance might decrease unpleasant cognitive automatic associations about women and leadership in employees' mind.

Counter views claimed that mere exposure or contact with prejudiced group members may not necessarily decrease overall stereotypic or prejudicial attitudes. Exposure to counter-stereotypic figures can even increase prejudice depending on the characteristics of the contacted figure (Rudman, 2005). People may tend to show greater disliking of women leaders – the so-called backlash effect – following the exposure to them (Rudman & Glick, 1999; 2001). Backlash effect can occur because the occupation of leadership position mismatches with the traditional role of a woman as predicted by role congruity theory (Eagly & Karau, 2002; Eagly & Diekman, 2005). A more recent view (Rudman, 2005; Rudman & Phelan, 2008) underlies the characteristics of women managers. Masculine traits such as dynamic and agentic characteristics of female managers (e.g., the image of strong woman manager) might help employees to label the female manager as a leader, but can paradoxically lead to greater disliking of her over time. This is because of the constant breach of the culturally stereotypic norms and expectations about female characteristics, e.g., feminine and communal traits (Heilman, 2001; Heilman & Eagly, 2008).

Another counter view claimed that mere exposure or contact with prejudiced group members does not necessarily change overall stereotypes and prejudices. The mere exposure or the pleasant experiences and the success of contact figures (e.g., women leaders) may not be sufficient to challenge implicit level stereotypes and prejudices. APE model (Gawronski & Sritharan, 2010; Rydell & Gawronski, 2009) explains that the contact figure (e.g., a likable and successful female manager) might be seen as an

exception in work life and intentionally ignored while evaluating the overall group – women in management. In the attitude literature, researchers call this phenomenon as sub-typing (Hugenberg, Blusiewicz & Sacco, 2010; Kunda & Oleson, 1995). APE model (Gawronski & Bodenhausen, 2006; 2011; Gawronski & Sritharan, 2010; Rydell & Gawronski, 2009) argues that at the implicit level, sub-typing tendencies emerge as a change in contextualized implicit attitudes. In the present context, I similarly propose that employees might contextualize their positive experiences with the female leader only to their immediate work setting where they are exposed to a female leader without generalizing to the overall female leader group. Gawronski and Bodenhausen (2011) argue that the context dependent changes in implicit attitudes first co-exist with stable generalized implicit prejudicial attitudes. However, a longer period of repeated exposure can allow the generalization of pleasant experiences to other members in the group – e.g., hence, less implicit prejudice toward women leaders over time.

Taken together, what remains a big theoretical question is whether and under what conditions exposure to a female leader might increase, decrease or not influence implicit stereotypes and implicit prejudice toward female leadership at work (Lai, Hoffman & Nosek, 2013). The present objective is to provide an answer to this theoretical question by integrating diverse theoretical arguments in leadership literature and social-cognitive psychology literature. First, I ask whether implicit attitudes toward female leadership change or not change following the first time exposure to a woman leader at work. Second, I examine perceived leader characteristics, employee characteristics and perceived interaction between leader and employee as potential facilitators of the malleability of implicit attitudes toward women leaders. I propose a research model in which I theorize about the malleability of the context dependent implicit stereotyping as well as the generalized implicit prejudice toward female leadership following the real life exposure to a female leader. Accordingly, the change of implicit stereotyping and implicit prejudice toward female leadership can be shaped by employee perceptions on a) leader characteristics (i.e., leader success and agentic/communal traits), b) their own characteristics (i.e., employee gender and gender role orientations) as well as c) leader-employee interaction (i.e., the quantity-quality of interaction). Considering the role congruity theory and ILTs approach, I postulate that implicit stereotypic/prejudicial attitudes

toward leadership could change over time when leadership prototypes involve more stereotypically female characteristics such as sensitivity.

I conducted a longitudinal field study to examine the dynamic pattern of implicit stereotypes and implicit prejudice toward female leadership from the perspective of employees at an organizational setting. To the extent of my knowledge, no prior study theoretically modeled context dependent implicit stereotyping as well as within person variations of generalized implicit prejudice toward leadership of women at work. None investigated the dynamic patterning of change in implicit attitudes at work in response to contact with a woman leader. Instead, a large body of past empirical findings on stereotyping and prejudice against women's authority are based on well-designed experiments, but conducted within very short time (e.g., within an hour or day). This has been criticized by the implicit attitude and leadership literature (Asgari et al., 2010; Beaman et al., 2009; Beaman, Duflo, Pande & Topalova, 2012; Dasgupta & Asgari, 2004; Eberly et al., 2013; Epitropaki & Martin, 2004; 2005; Foti et al., 2008). Brief experimental exposure to cues/ images/names of women leaders activates the association between female and leadership representations in mind and may temporally decrease stereotypes/prejudice. However, we do not have much knowledge on the transferability or the durability of longer-term contact of female leaders at work. Implicit cognitions are very sensitive to contextual cues (Olson & Fazio, 2006). In contrast to experimental studies, in an actual social setting, members can continue to show negativity and discrimination against others even though experimental findings indicate diminishing implicit prejudice. The dynamics of one's experience with and evaluations of actual leader characteristics and behaviors over time are crucial to capture real life exposure effect (Dasgupta & Stout, 2012). Their generalizability to real world setting is, hence, questionable.

A limited number of longitudinal field studies have examined the role of exposure in the change of implicit attitudes toward female leadership (i.e., Beaman et al., 2009; Dasgupta & Asgari, 2004). Existing two studies show decreases in implicit stereotyping after a one-year exposure to female authority figures in women's college (Dasgupta & Asgari, 2004), but also higher likelihood of stability in implicit prejudice against female leadership over two-year exposure to female representativeness in Indian villages (Beaman et al., 2009). These two studies are very important and

inspiring for the current work. However, their findings may not still be easily applicable to work setting. Their samples were either students of women colleagues in the USA (Dasgupta & Asgari, 2004) or the citizens of villages in India (Beaman et al., 2009). They sampled only female participants (Dasgupta & Asgari, 2004) or did not account for the leader characteristics or subjective experiences with a specific female leader (Beaman et al., 2009; Dasgupta & Asgari, 2004). In the current study, I sampled employees who work under the authority of real-life female leaders at work. I incorporate subjective experiences with the leader and employee characteristics in the research model.

Apart from the generalizability concerns, the understanding on the malleable attitudes toward women leaders at work is crucial for practical realm. Such an understanding can help decision makers to evaluate the potential success of gender equality policies at work context as well as the limits of female leaders' influence over employees and other stakeholders (De Paola, Scoppa & Lombardo, 2010; Epitropaki, Sy, Martin, Tram-Quon & Topakas, 2013). Widespread organizational policies and political initiatives force gender quotas at authority positions. They partially aim to decrease stereotyping/prejudice and discrimination against women's leadership (De Paola et al., 2010; Pande & Ford, 2012). Any empirical evidence for or against the malleability of stereotyping/prejudice against women leaders is essential for further political and organizational policies and activities.

In sum, the current dissertation aims to contribute to organizational literature by proposing a research model of the malleability of implicit stereotyping and implicit prejudice toward female leadership at work context. It tests its research model in a longitudinal field study where employees were exposed to a woman leader for the first time in their organizational context. Besides, it offers a methodological contribution by examining the type of change of the repeated measurement of implicit attitudes toward female leadership (Golembiewski, Billingsley & Yeage, 1976; Thompson & Hunt, 1996; Vandenberg, 2002; Vandenberg & Lance, 2000), which is largely presented in the theoretical background section. The following section briefly introduces the current research context.

1.2.Current Research Context

It is very challenging to find malleability of implicit attitudes toward female leadership in real life context where gender inequality is pervasive in the society and organizations. I tested my arguments in such a challenging context - Turkey (see, Kabasakal, Aycan, Karakaş & Maden, 2011). Turkey ranks 120th out of 136 at the gender equality index according to the 2013 global gender gap report (World Economic Forum, 2014). It has relatively low participation of women in non-agricultural labor force (23%) as well as political and top managerial positions in organizations (12%) (World Economic Forum, 2014). In terms of societal culture, Turkey has one of the lowest scores in gender egalitarianism cultural value orientation (House et al., 2004), suggesting societal values and norms approving gender inequality. Hence, there is a cultural reluctance to accept women in authority or decision making positions (Aycan, 2004; Kabasakal & Bodur, 2007). People in Turkey are stereotypically expect women to function in supportive positions at work, rather than being in charge or occupy positions of power. The cultural stereotypic female gender roles in Turkey do not seem to match with leadership roles (Sümer, 2006).

Any evidence on the malleability of attitudes toward women in management within such a context where gender inequality is culturally accepted has very important implications for the generalization of findings to other contexts. George and Bennett (2005) claimed that if theoretical expectations are verified for cases in which conditions act against the predictions, the probability of finding evidence supporting the theory are more likely in other cases. Due to the low gender egalitarianism values and gender inequality in the society, the context of Turkish organizations constitutes one of the conservative cases to find malleability of attitudes toward female leadership. The Turkish context, hence, provides a valuable opportunity for testing and revising the theoretical models on implicit attitudes toward female leadership.

I utilize the case of 2014 local management elections in Turkey where some municipalities had a female mayor for the first time in their history. I investigate whether the first time exposure to a woman mayor in municipalities might challenge employees' context dependent implicit stereotyping and generalized implicit prejudice against women leaders over time. Furthermore, I examine whether employees'

personal interaction with the mayor, their perceptions about mayor's agentic-communal characteristics as well as her success, and any change in their leadership prototypes might predict the presence and/or direction of change in implicit attitudes toward female leadership.

1.3.Outline of the Dissertation

I review the relevant literature on implicit attitudes, women in management and follower centric leadership theories in the following chapter. This second chapter presents the current theoretical arguments, proposes the research model and the hypotheses. The third chapter discusses the methodology of the study including municipality selection and participant sampling, measures, data collection procedures and statistical analyses. The fourth chapter presents the empirical research findings. The fifth and final section summarizes the main findings and discusses the theoretical as well as practical implications of the current research. It also discusses the limitations of the study and directions to future research.

2.

THEORETICAL BACKGROUND & HYPOTHESES

2.1. Conceptualization of Implicit Attitudes toward Female Leadership

Greenwald and Banaji (1995) coined the term *implicit attitudes* to describe evaluations about social entities that are not easily identified with introspection. Implicit attitude constitutes automatically activated, unintentional evaluations that operating out of conscious awareness. They are in contrast to e*xplicit* attitudes, which are deliberately processed conscious evaluations. Implicit attitudes versus explicit attitudes are components of attitudes, but also the products of diverse neuro-cognitive mechanisms (Olson & Fazio, 2006; Gawronski & Bodenhausen, 2006; Ito, 2010; Payne & Gawronski, 2010).

Associative and Propositional Evaluation (APE) model in social-cognitive psychology (Gawronski & Bodenhausen, 2006; 2011; Gawronski & Sritharan, 2010) posits that implicit versus explicit attitudes are, respectively, outcomes of *associative* evaluations and *propositional* evaluations. Accordingly, information about social entities is stored as a web of cognitive representations in the memory. Associative evaluation results from automatically activated mental associations/ties among cognitive representations. Environmental cues can trigger specific associations and neighboring cognitive representations in the associative network. An activated set of cognitive representations manifests itself as implicit attitudes during attitude assessment, such as implicit association tests (IATs) (Greenwald, McGhee &

Schwartz, 1998). IAT is a computerized test that measures reactions times and errors in category sorting tasks as proxies for the strength of the association among cognitive representations (Greenwald et al., 1998). In contrast to associative evaluation, propositional evaluation involves a deliberate, intentional and controlled thinking process. We often capture such an effortful process and resulting explicit attitude in classical self-report attitude measures.

Neuro-imaging studies support the brain level distinction of these cognitive processes as well as explicit attitudes versus implicit attitudes. In his extensive review, Ito (2010) reported that effortful, controlled thinking and explicit attitudes are associated with higher cortical areas in brain responsible for executive functioning and deliberation (such as medial and lateral pre-frontal cortex). In contrast, associative processes and implicit attitudes are related to lower cortical brain regions responsible for somatic and affective processing, such as amygdala and basal ganglia. Theoretical models and empirical findings, hence, indicate diverging mechanisms and a clear conceptual differentiation of explicit versus implicit components of attitudes. The current study theorizes only on associative processes and the malleability of implicit components of attitudes toward women leaders.

I define *implicit attitude toward female leadership* as unintentional, non-consciously operating and automatically activated cognitive associations and affective evaluative tendencies about female leaders. Leadership literature often ignored implicit prejudicial attitude toward female leaders and did not much distinguish it from stereotyping. Although they are related, implicit stereotyping and implicit prejudice are conceptually distinct psychological tendencies (Amodio & Devine, 2006; Beaman et al., 2009; Lai et al., 2013; Rudman et al., 2001; Payne & Gawronski, 2010). I, therefore, distinguish implicit stereotyping and implicit prejudice toward female leadership. *Implicit stereotypic attitude toward female leadership* corresponds to automatic, unintentional and non-conscious cognitive dissociation of female and leadership representations in mind. *Implicit prejudicial attitudes toward female leadership* corresponds to automatic, unintentional and non-conscious associations of women leaders with negative/unpleasant affective cues in mind (Rudman et al., 2001). I focus on their malleability and change following exposure to a female leader.

2.2. Malleability and Change of Implicit Attitudes toward Female Leadership

The malleability refers to immediate context-specific within person changes, whereas change refers to across situational and generalized variations of attitudes (Lai et al., 2013). Implicit cognitions have been known to remain stable across time and be unmalleable despite external interventions. Past research indicated that implicit attitudes tend to resist against manipulations in the immediate context, even though their explicit counterparts change (e.g., Greenwald & Banaji, 1995; Gregg et al., 2006; Lenton et al., 2009; Payne & Gawronski, 2010). Researchers reported that it is easier to acquire, but harder to suppress (e.g., Lenton et al., 2009) or modify (Gregg et al., 2006) implicit cognitions. On the other hand, cumulated recent empirical evidences reveal that implicit attitude can be sensitive to changes in the social context (e.g., Asgari et al., 2010; Beaman et al., 2009; Bernstein et al., 2010; Blair et al., 2001; Bosak & Diekman, 2010; Dasgupta & Asgari, 2004; Dasgupta & Greenwald, 2001; Dasgupta & Rivera, 2008; Gawronski & Bodenhausen, 2006; Gregg et al., 2006; Lenton et al., 2009; Rudman et al., 2001). As discussed before, not much is known about the boundary conditions for the sensitiveness of implicit stereotypes/prejudice toward women in general (Bosak & Diekman, 2010) and women's leadership in particular in response to changes in the work context.

The current dissertation can contribute to the leadership literature in organizational sciences by theorizing on context specific malleability and generalized change of implicit attitudes toward female leadership. The basic assumptions about the attitudes toward female leadership and their malleability rely on two follower centric leadership theories: a) dynamic stereotyping in role congruity theory (Eagly & Karau, 2002; Eagly & Diekman, 2005) and b) the connectionist framework of ILTs (Lord et al., 2001).

Role congruity theory (Eagly & Karau, 2002; Eagly & Diekman, 2005) explains stereotypes and prejudice against women management basing on social role approach. Gender social roles are driven from shared beliefs about how women and men behave/think/feel in general - what Heilman (2001) called as descriptive stereotype-based norms. Gender roles also constitute what women/men should do and should not do in a given situation – that is prescriptive stereotype-based norms (Heilman, 2001;

Heilman & Eagly, 2008). In most societies and organizational context, descriptive and prescriptive gender norms associate women more with feminine and communal characteristics such as being compassionate, helpful, or sensitive, whereas men with more masculine and agentic characteristics such as being strong, bold, or competitive, (Eagly & Karau, 2002; Eagly & Diekman, 2005; Heilman, 2001; Rudman, 2005; Schein, 2001). Male gender roles are similar to leadership roles (Powell & Butterfield, 1979; Schein, 2001) in most management and socio-cultural contexts (Koenig, Eagly, Mitchell & Ristikari, 2011). Hence, traditional female gender roles and leadership roles do not often match with each other. Therefore, people a) stereotypically not see women as leaders and b) they tend to dislike women managers – also called as backlash effect (Rudman & Glick, 1999; 2001). According to role congruity theory (Eagly & Diekman, 2005), backlash effect particularly occurs because women's occupation of an authority position violates prescriptive gender norms on communal/feminine characteristics (e.g., "women should not be in an authority position").

Dynamic stereotyping perspective explains that stereotypic and prejudicial attitudes can change through decreasing mismatch of leadership roles and gender roles. Such a change can occur through increasing levels of communal/feminine characteristics (e.g., sensitivity) in leadership roles or more agentic/masculine traits in gender roles (Diekman & Eagly, 2000; Duehr & Bono, 2006). Indeed, empirical findings indicate that female gender roles have been approaching more masculine/agentic characteristics, whereas leadership roles have been involving more communal/feminine characteristics over time in societies (e.g., Diekman & Eagly, 2000; Diekman & Goodfriend, 2006; Duehr & Bono, 2006). Such shifts in gender roles and leadership roles in most societies and organizational context over a long period can decrease stereotypic and prejudicial tendencies against women's leadership. In sum, role congruity theory highlights congruency between gender roles and leadership roles for a given context in explaining the nature of stereotypic and prejudiced attitudes against women leaders.

Another follower centric theory, ILTs, has similar arguments with role congruity theory, but mainly emphasizes the cognitive categorization of an individual based on leadership prototypes. ILTs originally described the implicit level schema about

leadership – leadership prototypes – and subsequent leadership evaluations as static entities (Lord et al., 1984). Accordingly, employees tend to rely on their leadership prototypes to categorize a target person as leader or not especially when they have limited and/or ambiguous knowledge about the person. Leadership categorization approach (Lord et al., 1984; Offermann, Kennedy & Wirtz, 1994) suggest that such prototype-consistent evaluations color further experiences with the leader, making original prototypes stronger and more stable in the given context. However, recent views highlighted the context dependent differentiation of ILTs. Indeed, empirical evidences revealed that organizational context such as culture (House et al., 2004), organizational structures, such as hierarchy (Dickson, Resick & Hanges, 2006), female leadership (Hogue & Lord, 2007) influence the content and processing of leadership prototypes. If the manager characteristics match with leadership prototypes for a given work setting (Hanges, Lord & Dickson, 2000) and cultural context (House et al., 2004), then employees perceive him/her as leader and attribute higher leadership effectiveness to the manager.

The connectionist framework of ILTs explains the malleability of leadership prototypes (Dinh & Lord, 2012; Epitropaki et al., 2013; Hogue & Lord, 2007; Lord et al., 2001; Lord & Shondrick, 2011). This approach exemplifies associative evaluative processes described in socio-cognitive psychology, i.e., Associative and Propositional Evaluation (APE) model (e.g., Gawronski & Bodenhausen, 2006; 2011; Gawronski & Sritharan, 2010). Accordingly, leadership prototype is mentally represented as a neural like network of information about various leadership attributes. Leadership prototype representations are embedded within information about emotions, values, beliefs, self-concept, memories about work situations, events and situational cues (Lord et al., 2001). A given contextual cue can automatically trigger the most activated path and therefore specific set of leadership attributes in the mental network. Such activation patterns about leadership can implicitly determine leadership evaluations – such as attitudes toward women's leadership (Hogue & Lord, 2007). People have tendency to categorize men as leaders, because most work contexts mentally invoke more masculine /agentic leadership characteristics (e.g., strong or dominant; Schein, 2001), rather than attributes associated with, for example, sensitivity. The activation of agentic/masculine characteristics in leadership prototypes match more with men and therefore employees tend to mentally associate males with leadership.

Scott and Brown (2006) empirically report such a pattern by investigating how leader gender shapes the ease of encoding of leader behavior. In their experimental study, they manipulated agentic versus communal leader behaviors as well leader gender. Then they assessed the ease of encoding of leader behavior via a latency based indirect test (i.e., lexical decision-making task). They found that agentic leadership characteristics are less mentally encoded, when leader is female compared to situation where the leader is male. Such an encoding pattern indicated the incongruity of gender stereotypes (i.e., communal female characteristics) and leadership prototypes (Hogue & Lord, 2007). Considering the role congruity theory (Eagly & Diekman, 2005; Eagly & Karau, 2002), the researchers argue that this tendency generally results in the association of leadership with males rather than females. Such an automatic tendency manifests itself in "think manager, think male" phenomenon as termed and empirically shown by Schein (2001).

The dynamic connectionist framework posits that environmental/organizational changes can change the activation patterns of leadership representations as well as the content of leadership prototypes (Lord et al., 2001). In the context of female leadership, I suggest that organizational level changes such as working with a female leader can alter the activation patterns and even increase the communal characteristics represented leadership prototype.

A few studies tested the long-term changes in ILTs at work setting (e.g., Epitropaki & Martin, 2004; 2005). For example, Epitropaki and Martin (2004; 2005) assessed leadership prototypes of employees with self-report scales within a one-year period. However, in contrast to the predictions of connectionist framework of ILTs, they found no change in leadership prototypes. As noted by the researchers, there was not any critical change at the work context within their observation period. The only change was new manager succession for a small group of employees (n = 61) and the repeated measure ANOVA test revealed no significant effect of it. Researchers called for further studies to consider and model the effect of contextual alterations on leadership prototypes and resulting alterations in leadership evaluations at a longitudinal field setting. The current study examines a contextual level change at organizational environment – a first time female leader succession - and provides opportunity to explore any alterations in leadership prototypes in a longitudinal design.

The exposure to a figure that is counter to stereotypes has been discussed as the basic predictor of change in automatic stereotyping and prejudice (Asgari et al., 2010; Beaman et al., 2009; Dasgupta & Asgari, 2004; Dasgupta & Rivera, 2008; Gawronski & Bodenhausen, 2006). A first time exposure to a female leader represents a counter-stereotypical exemplar to most employees. I, therefore, focus on the female leader succession - exposure to a woman leader - as a contextual factor to understand the unfolding patterns of implicit attitudes toward female leadership.

2.3. Role of Exposure to a Woman Leader on Implicit Attitudes toward Female Leadership

There are different theoretical views in social and cognitive psychology that explain whether and how implicit stereotypes and prejudice toward a group can change following exposure to a counter-stereotypic figure (e.g., Eagly & Karau, 2002; Gawronski & Bodenhausen, 2006; 2011; Rudman, 2005; Rudman et al., 2012). I compare the predictions of these diverse views, namely, intergroup contact theory in social psychology, the associative and propositional evaluation (APE) model in socio-cognitive psychology, ILTs approach and the role congruity approach in leadership theories.

In brief, the intergroup contact theory suggests that a mere observation or exposure to members of prejudiced groups can decrease stereotyping and prejudice (Allport, 1954/1979; Pettigrew, 1998; Pettigrew & Tropp, 2006). However, a body of research argues the insufficiency of mere exposure explanation on the malleability of implicit attitudes (e.g., Dasgupta & Asgari, 2004; Deikman & Goodfriend, 2006; Duehr & Bono, 2006; Greenwald & Banaji, 1995; Gregg et al., 2006; Lenton et al., 2009). Exposure to counter-stereotypic figures may not necessarily alter stereotypes or prejudices, because counter-stereotypic figures can be seen as atypical and exceptional members of a social group. Besides, exposure to a member of a prejudiced group – woman leader – can even increase the stereotypic and prejudicial attitudes, the so-called backlash effect (Eagly & Karau, 2002; Rudman & Glick, 1999; 2001). I am explaining these contradicting theoretical arguments and the current propositions in detail below.

2.3.1. Mere exposure to a female leader

Intergroup contact theory originally hypothesized the main effect of exposure and personal contact with a member of the prejudiced group (Allport, 1954/1979; Pettigrew, 1998; Pettigrew & Tropp, 2006). Accordingly, even only the observation of - mere exposure to - a member of a prejudiced group who is positioned or act counter to common stereotypes and prejudicial beliefs can challenge prejudice toward his/her social group. A woman leader exemplifies a counter-stereotypic figure in most societies (Schein, 2001).

Past research supported the contact arguments and revealed that brief exposure at a laboratory setting (e.g., Blair et al., 2001; Johnson et al., 2008; Rudman & Goodwin, 2004; Rudman & Kilanski, 2000) or longer term real life exposure (e.g., Beaman et al., 2009; Dasgupta & Asgari, 2004) can decrease implicit stereotypic or prejudicial attitudes. Most experiments exposed respondents to women leaders by giving either a biographical information, names or images of well-known female leaders, or asking to imagine successful women authority figures (e.g., Beaman et al., 2009; Blair et al., 2001; Dasgupta & Asgari, 2004; Hugenberg et al., 2010; Lenton et al., 2009). For instance, Blair and colleagues (2001) asked participants to imagine characteristics of an agentic/masculine woman leader (e.g., strong woman). Such a strong woman image was in contrast to common female gender stereotype on communal/feminine characteristics (e.g., caring woman). Then, they assessed implicit stereotypes toward women in general via gendered-IAT and found weaker stereotype activation after momentary exposure. Similarly, in their experimental study, Dasgupta and Asgari (2004) exposed participants to biographical information about successful and famous women leaders and reported lower implicit stereotyping toward female leadership (assessed via IATs). Lenton and colleagues' (2009) meta-analysis on the malleability of implicit stereotypes indicate the success of mere exposure to counter-stereotypic female figures for decreasing automatically activated stereotypes toward women in general.

In contrast to brief exposure procedures in most experimental studies, people have diverse and long periods of experiences with women leaders at real life settings. In fact, the optimal conditions suggested by intergroup contact theory (Allport,

1954/1979; Pettigrew & Tropp, 2006) emphasize that pleasant cumulated experiences with the members of prejudiced groups over time can act against prejudice. The repeated exposure to a member of a prejudiced group can increase one's familiarity with the group. It can decrease anxiety toward the members of the prejudiced group and can even enhance positive feelings toward the group members. However, recent meta-analysis points out that, irrespective of the content of experiences, mere exposure can be sufficient to decrease prejudice (Pettigrew & Tropp, 2006). Hence, intergroup contact perspective states that exposure to prejudiced groups can challenge prejudice by itself, and pleasant experience with the group members can facilitate the exposure effect.

Considering these arguments, I argue that mere exposure to a female leader at work as well as cumulated positive experiences with her can alter employees' implicit stereotypic and prejudicial attitudes toward female leadership. However, such a mere exposure may not be sufficient to alter implicit stereotyping or implicit prejudice, because people may not consider atypical figures – a positive image of women manager- while evaluating the given social phenomenon – women's leadership. Hence, stereotypic and prejudicial attitudes might be preserved, a phenomenon known as sub-typing (Kunda & Oleson, 1995). The APE model suggests that sub-typing might emerge as the contextualization of implicit forms of attitudes in associative networks.

2.3.2. **Context dependent implicit stereotyping toward female leadership**

Gawronski and colleagues (Gawronski & Bodenhausen, 2011; Gawronski & Sritharan, 2010; Rydell & Gawronski, 2009) suggest that sub-typing of counter-stereotypic figure during attitude assessment (Kunda & Oleson, 1995) may involve controlled and conscious propositional evaluations and therefore may not be easily transferable to implicit level theories. Implicit attitudes may change even though explicit attitudes resist interventions due to sub-typing effect. That is, automatic and sub-conscious cognitive representations might only change for a given context - be sub-typed - and may not be easily generalizable to other contexts. Hence, at a relatively short amount of exposure, automatic stereotyping might show context

dependent malleability. The relatively long-term exposure can lay the ground for the accumulation of consistent positive experiences with counter-stereotypic figures, resulting in the generalization of implicit attitudes across contexts.

The context dependent change in implicit attitudes is similar to changes in temporal activation pattern of associative network (Gawronski & Bodenhausen, 2011; Gawronski & Sritharan, 2010; Rydell & Gawronski, 2009). In a shorter amount of contact with counter-stereotypic figures, people might first alter automatic attitude only for the immediate context. A study of Hugenberg and colleagues (2010) exemplifies such contextualization argument. Researchers took sub-typing as women in specific contexts, either boardroom or kitchen. They utilized mental imagery procedure (Blair et al., 2001) by asking respondents to imagine a strong and successful woman. They assessed automatic associations between women and strength related words. They presented either "woman at boardroom" or, "women at kitchen" image. Immediately after the presentation of image, either strength related word (e.g., bold, strong, power, iron, and durable) or weakness related words (e.g., quiet, weak, gentle, delicate, docile) appeared on a computer screen. Hugenberg and colleagues (2010) found low latencies and therefore stronger mental association between business-women images and words. Low latency suggests stronger association between business-women images and words representing strength, but no change in other images of women. Their findings revealed that implicit stereotypic attitudes toward female may not change for overall women group and might be restricted to specific context – e.g., business.

The APE model (Gawronski & Bodenhausen, 2011; Gawronski & Sritharan, 2010; Rydell & Gawronski, 2009) does not theorize on leadership processes, yet its arguments are parallel to the connectionist framework of ILTs (Dinh & Lord, 2012). ILTs contend that changes in the work context – e.g., new managers - can activate formerly weaker associations about leadership and therefore alter mental activation patterns about leadership over time (Dinh & Lord, 2012). For example, Foti and colleagues (2008) provided one of the first tests of such context sensitiveness of leadership evaluations. Their experimental design allowed respondents to observe and evaluate various range of hypothetical male and female leader behaviors. They examined stable versus dynamic patterning in leadership perceptions and evaluations

under diverse personal relevance and specific contextual manipulations. They found that across contextual manipulations people usually perceived male candidates as leaders. However, depending on the perceived match of leadership prototypes and female characteristics, respondents sometimes categorized female candidates as leader. Their experimental studies reveal that leadership prototypes and leadership perceptions have dynamic pattern, especially for female leader candidates. Foti and colleagues' (2008) experimental finding imply that leadership perceptions can be dynamically constructed and re-constructed through the observation of diverse range of female leader behaviors within a given context.

Considering the contextualization argument of the APE model as well as implications and evidences of ILTs approach, I posit that employees might similarly experience diverse experiences with women leaders and diverse ranges of within person evaluations on female leadership at relatively earlier periods of exposure to a woman leader. At earlier periods, exposure to a female manager may not easily challenge overall implicit attitudes toward female leadership. However, the mental association of female and leadership in the given work context might get stronger. The positive experiences with the female leader, for example observing the successful decisions of the leader, the organizational performance as well as frequent and high quality relationship with her, can further facilitate the strength of mental associations between female and context dependent leadership. I argue that such context dependent changes in the activation pattern about leadership might be reflected on less automatic stereotyping against women's leadership at the immediate work setting – that is, lower context dependent implicit stereotyping against female leadership.

Even though employees may associate female and leadership at a given work context, they might still automatically dislike or not favor female leaders in general. In other words, we can still observe the stability of implicit prejudice against women's leadership. After relatively long exposure to a woman leader, context dependent changes in implicit stereotypes with pleasant experiences can be generalized to implicit prejudice against overall group of female leaders.

2.3.3. Generalized implicit prejudice toward female leadership

APE model (Gawronski & Bodenhausen, 2011; Gawronski & Sritharan, 2010; Rydell & Gawronski, 2009) stated that repeated exposure and context dependent activations could provide conditions for the formation of new ties in associative evaluative network. This can lead to the *de-contextualization* and generalization of implicit attitudes to overall social group, which corresponds to change in the generalized implicit prejudice toward female leadership in the present study. This idea originates in evaluative conditioning (EC; Olson & Fazio, 2006) model (Gawronski & Bodenhausen, 2006; 2011). EC model states that after repeated pairings of a positively or negatively valence unconditioned stimulus with a neutral stimulus, the valence of the neutral stimulus becomes positive or negative (Olson & Fazio, 2006). Repeated temporal and/or spatial pairings of attitude objects with positive/negative stimuli leads to new associations in mind about attitude objects and therefore result in structural changes in the associative network (Gawronski & Bodenhausen, 2006). This is one of the basic mechanisms of change in implicit prejudice in general. For example, one experimental study indicate that after repeated spatial pairings of youth with negative words and old with positive words, people show lesser implicit prejudice against older people in IAT (Karpinski & Hilton, 2001).

Lengthy exposure to counter-stereotypic figures provides condition for EC in social life (Olson & Fazio, 2006). For example, in their longitudinal study, Bernstein and colleagues (2010) demonstrated that implicit racial prejudice against Black people decreased following Obama's election in 2008. Researchers examined undergrads' implicit and explicit race biases before and immediately after 2008 election. They found that students' implicit race biases, but not explicit ones, significantly declined after Obama's presidential victory. The change in implicit bias without any change in explicit counterparts exemplifies EC process in associative networks (Gawronski & Bodenhausen, 2011). The real-life pairing of attitude objects with pleasing outcomes/processes can make the valence of attitude toward object positive. This corresponds to the less negativity and prejudice against the object (Gawronski & Bodenhausen, 2011).

Along with EC process, APE model (Gawronski & Bodenhausen, 2006) informed that more conscious and controlled level processing on attitude objects (i.e., propositional evaluation) could indirectly influence implicit attitudes. People can acquire new information about female leaders and explicitly reason about their own experiences with them. APE argues that such subjective encounters can give way to the formation of new associations among the cognitive representations (Gawronski & Bodenhausen, 2011). These arguments are in line with social contact theory: contact was assumed to provide opportunities to learn more about members of social groups (Allport, 1954/1979). Contact and subjective experiences with attitude figures can allow the formation of affective ties, such as trust and friendship (Pettigrew, 1998). APE model similarly suggest that consistent and favorable personal experiences might expand the structure of associative network by adding new and pleasant information about attitude objects, which reflect on the de-contextualized implicit prejudicial attitudes.

Rydell and Gawronski (2009) empirically illustrate the formation of context independent implicit attitudes and the role of subjective experiences on such formation. Researchers found that the homogeneity of evaluations about prior experiences with attitude objects might determine the generalization of context-dependent attitudes across diverse contexts. They argue that the associative representation of the attitude object can be homogenous, if diverse stimuli coming from the attitude object (e.g., subjective experiences with the object) activate the same pattern of association. If previous evaluations are homogenous across contexts, then attitude toward the object might be generalized to other contexts. If they are heterogonous (contradict with each other), then the valence of experiences (e.g., positivity or negativity) and context in which attitude object is encountered influence evaluations. This might result in context dependent automatic evaluations. Extended exposure, EC process and propositional evaluations can homogenize the encounters with attitude objects over time.

I similarly propose that at earlier stage of exposure to a female leader, employees might experience a range of positive experiences with and evaluations about female leaders. In a lengthy exposure period, if the subjective experiences with a woman leader are cumulatively and consistently positive, then those positive

experiences might make cognitive representations of women leaders more positive through EC process. For example, employees might perceive the successful performance of women managers in high authority positions. In another instance, employees may also have positive affective and professional exchanges with the female leader at their work context. Therefore, these cumulated positive experiences may support the formation of new associations between women leaders and positive cues in mind, revealing in less generalized prejudice against women leaders. Employees may also think about such frequent and diverse experiences with the female leader. These propositional evaluative processes can indirectly influence the formation of new associations. As a result, employees might be more likely to associate female leader in general with pleasant words in IAT (Rudman et al., 2001), resulting in lower implicit prejudice toward female leadership.

In contrast to these predictions, considering the backlash arguments in female leadership literature, one can suggest that implicit stereotyping and particularly implicit prejudice can increase following the exposure to a female leader at work.

2.3.4. Backlash arguments

As argued before, role congruity theory (Eagly & Diekman, 2005; Eagly & Karau, 2002) mainly argues that women's occupation of leadership positions might mismatch with stereotypic female gender roles in most work context and therefore give way to prejudiced attitudes, e.g., disliking, of women leaders. Rudman and colleagues (Rudman, 2005; Rudman, Moss-Racusin, Phelan & Nauts, 2012; Rudman & Glick, 1999; 2001; Rudman & Phelan, 2008) theorize that the backlash effect can particularly occur when women managers have more agentic and masculine characteristics and therefore violate prescriptive gender norms of most societies (e.g., "women should not be dominant"). This creates a paradox to women management. People often expect women managers' to show gender-role congruent behaviors, i.e., communal/feminine characteristics such as being sensitive to others' needs. Such behaviors often are not sufficient for employees to label women managers as leaders, because leadership prototypes mostly involve masculine/agentic characteristics, such as dominant (Lord et al., 2001). The agentic/masculine characteristics of women

managers, such as being assertive, dominant, competitive, can aid the categorization of them as leaders. However, these characteristics are incongruent with cultural-stereotypical gender roles in most societies, and therefore usually result in the perceived breach in gender norms. This might lead people not to favor and to dislike women leaders. People might claim leadership to them, yet simultaneously show higher prejudice against them.

Women's success in traditionally male sex typed tasks – such as leadership- might similarly violate women's prescriptive gender roles (Heilman & Eagly, 2008; Heilman & Haynes, 2005; Kulich, Ryan & Haslam, 2007). A successful performance track might enhance women managers' categorization as leaders, but breach the gender norms at the same time. Furthermore, people might tend to rationalize woman's successful performance in a traditionally male typed task – such as leadership/management in municipality- by not attributing success to her inner abilities or skills, but to factors outside of her. Hence, her abilities and successful performance might not be even enough to challenge the stereotypical and prejudicial views (Heilman & Haynes, 2005).

In terms of the implicit forms of stereotyping and implicit prejudice toward female leadership, backlash related evaluative processes about the current female leader might not challenge mental representations about leadership. It may avoid the generalization of positive experiences with the immediate female leader to other context. It, therefore, may not alter implicit stereotyping or implicit prejudice.

2.4. The Present Study

The present study considers these divergent perspectives on the role of exposure to a female leader on implicit stereotyping and implicit prejudice toward female leadership. The study offers to examine within person variations in implicit stereotypic and prejudicial attitudes toward female leadership. I investigate the extent of change – i.e., both generalized changes as reflected on within person variations as well as context dependent changes in implicit attitude toward female leadership. It further examines employees' subjective experiences with leadership. The

incorporation of richer employee experiences with a woman leader is essential for observing the limits of implicit attitude malleability.

In order to test these arguments, I conducted a longitudinal field study on municipality level local management. This is critical because few longitudinal studies exist to test the malleability of implicit attitudes against women's leadership after relatively long and real life exposure to a woman leader (i.e., Dasgupta & Asgari, 2004; Beaman et al., 2009) and to the extent of my knowledge, no study has investigated them in a work context. Dasgupta and Asgari's (2004) longitudinal field study, compared female college students who have been exposed to female deans or presidents in a women's college with those in regular (i.e., coed) colleges in the USA. They assessed female students' automatic stereotyping at the first years and then at their sophomore year. They found increases in automatic association of female and leadership after one year in women's college. Dasgupta and Asgari's (2004) findings indicated that longer-term exposure to a woman leader figure is pertaining to female students' lower automatic stereotypes toward women leaders.

Another study is a more recent and large randomized field experiment by Beaman and colleagues (2009). Researchers studied change in male and female villagers' attitudes toward female leadership after exposure to female council members in Indian villages. The study's socio-cultural context is relatively relevant for the present proposal. Similar to Turkish context, India ranks lower levels at gender equality index (World Economic Forum, 2014) and has relatively lower scores in gender egalitarianism cultural value orientation (House et al., 2004). Beaman and colleagues examined the effect of women council members on Indian adolescents' and their parents' implicit cognitions toward women's management in general. Researchers benefited from a law in India, which dictated the appointment of women in the randomly selected village councils of India in 1993. They provided surveys to adolescents and their parent in 495 villages, which were randomly selected for law enforcement. Researchers compared these villagers with villagers who had no female member in councils (Beaman et al., 2009; 2012). They reported decreases in female-leadership occupation association in IAT two years later after the exposure (Beaman et al., 2009) as well as increases in female adolescents' aspirations for leadership (Beaman et al., 2012). Researchers also compared automatic stereotypes against

women's management (i.e., gender-occupation IAT) in the first cycle (2 years later) and second cycle (4 years later) of elections. They further provided randomly selected voters either female voice or male voice of a hypothetical leader delivering speech. They asked respondents to evaluate the decisions taken by female/male leader in a vignette. They found that those villagers who were not exposed to female council members show more biases while evaluating the effectiveness of female leaders in hypothetical scenarios.

Dasgupta and Asgari's (2004) as well as Beaman and colleagues' (2009; 2012) studies indicate the malleability of implicit attitudes toward female leadership after exposure to women authority figures. Nevertheless, their findings may not be easily generalizable to work setting (Dasgupta & Stout, 2012). Working under the authority of a woman leader on daily basis is a psychologically different phenomenon than being represented by a female in a village council, or a being student in a college. Beaman and colleagues studied voters who had indirect interaction with women council members. Voters reported to have limited amount of personal experience with female representatives (Beaman et al., 2009): 33% to 67% of citizens knew the name of the female representative, and only the minority of them (almost exclusively men) participated in village meetings and personally observe female village representative. In contrast, employees tend to have opportunity to interact with and observe female leader in a more frequent and closer basis. Organizational setting constitutes richer and diverse experiences with leadership phenomenon in general and female leaders in particular. While automatic stereotypic attitudes are changing, implicit prejudices against women's leadership can persist depending on subjective experiences and quality of relationship with female leadership as well as dynamic revision of leadership prototypes. This can result in continuing negativity against women leaders, despite changes in automatic stereotyping. Moreover, change in implicit attitude toward female leadership can have discontinuous pattern– i.e., context dependent versus overall changes - within one year observation which has not been captured in Dasgupta and Asgari's (2004) as well as Beaman and colleagues' (2009) studies.

2.4.1. Research questions and the research model

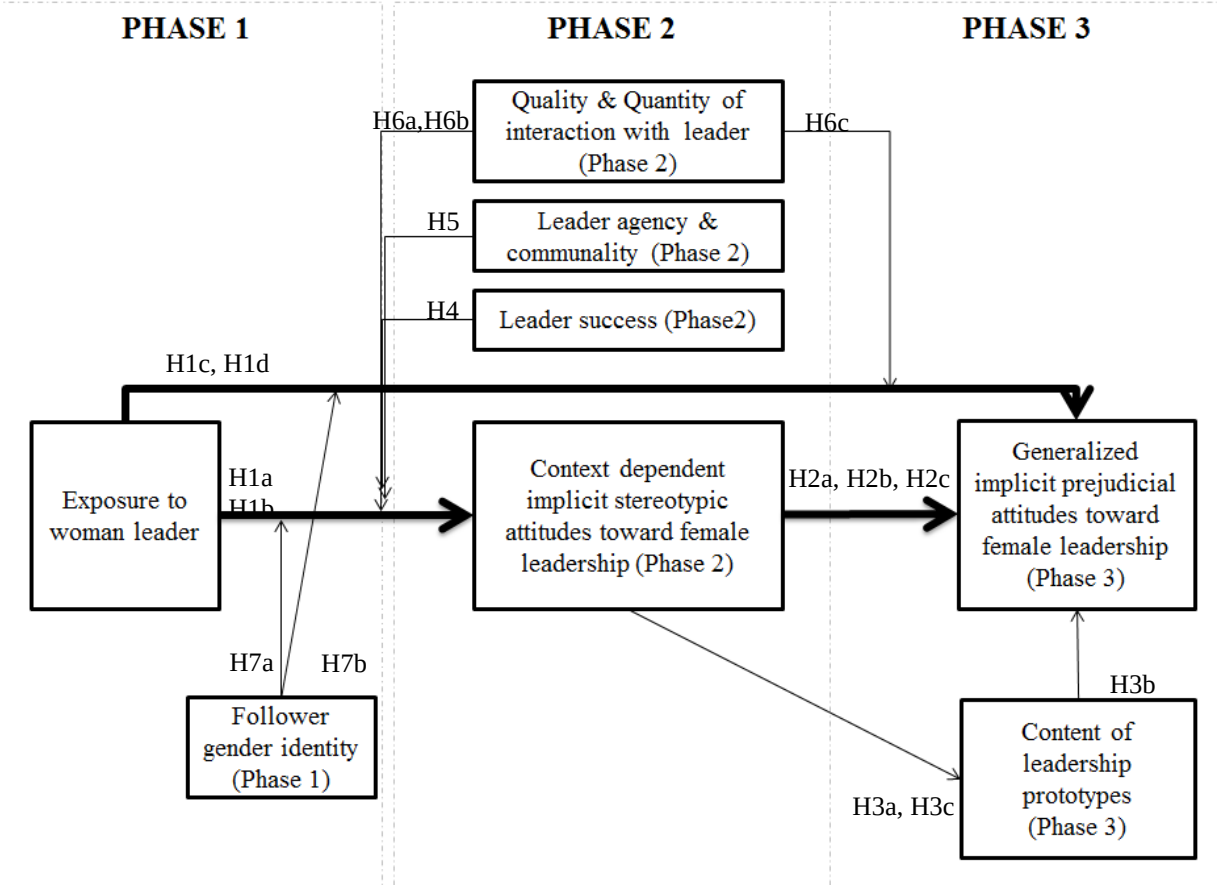
Taking the past literature and theoretical arguments into consideration, the current dissertation study focuses on four main research questions:

1. *Can exposure to a female leader alter implicit stereotypic and implicit prejudicial attitudes toward female leadership?*
2. *To what extent does the context dependent implicit stereotyping and generalized implicit prejudice against female leadership unfold over time?*
3. *To what extent does the context dependent malleability of implicit stereotyping mediate the relationship between exposure and the generalized implicit prejudice against female leadership?*
4. *Do a) change in the content of leadership prototypes, b) perceived leader success, c) leader's communal-agentic characteristics, d) the quality and the quantity of interaction with the leader and e) gender identity influence the relationship between exposure and the context dependent implicit stereotyping as well as generalized implicit prejudice against female leadership?*

I propose that exposure to a woman leader can alter context dependent implicit stereotypic attitudes and the long term generalized implicit prejudicial attitudes toward women's leadership. The context dependent malleability of implicit stereotyping can mediate the exposure's effect on generalized implicit prejudice against women's management. Alterations in the feminine content of leadership prototypes, such as sensitivity, can also mediate the relationship between implicit stereotyping and change in generalized implicit prejudice against female leadership. Frequent pleasant experiences with the female leader, female leaders' balanced agentic-communal characteristics, higher perceived leader success as well as followers' gender identity can predict lower levels of context dependent implicit stereotyping and higher changes in generalized prejudice against female leadership. I illustrate the present research model at Figure 2.1.

Figure 2.1.

Research Model



2.4.2. Operationalization of time

In order to examine the unfolding pattern of implicit attitudes toward female leadership, I collected attitudinal data from municipality civil servants three times with three-month intervals: *Phase 1* (6 to 9 months after election), *Phase 2* (9 to 12 months after election) and *Phase 3* (12 to 15 months after election). The choice of time scale – i.e., "the size of temporal interval" (Zaheer, Albert & Zaheer, 1999) - was a crucial issue in longitudinal studies.

The literature is almost mute about the time scale necessary for the occurrence of change in implicit stereotypes or implicit prejudice in general. Experimental studies tested the malleability of implicit attitudes toward female leadership within an hour/day. For the longitudinal studies, the period ranged from one year contact with female professors (Dasgupta & Asgari, 2004) to two and four year exposure to female village council members (Beaman et al., 2009).

In a case where we cannot anticipate periodicity before actual measurement, we should make empirical observations at relatively small intervals (Collins, 2006; Zaheer et al., 1999). The smaller observation intervals and time scales allows modeling finer changes. With regard to arguments and suggestions on time intervals, I preferred three-month time intervals. A shorter time lag (e.g., one to two months) would increase the reactivity towards re-tests for self-report and indirect tests (Nosek, Greenwald & Banaji, 2007a). Moreover, the theoretical models of implicit leadership cognitions and implicit attitudes do not predict rapid change at actual field setting. A longer time lag (e.g., four to six months) may not allow me to capture ongoing context dependent changes in implicit attitudes toward female leadership.

I collected data for three time points in order to assess the individual change trajectories on implicit attitudes toward female leadership. Two wave designs are problematic in capturing dynamic patterns of attitude change (for further discussion, Chan, 1998; Duncan & Duncan, 2004; Ployhart & Vandenberg, 2010). For example, one cannot capture nonlinear growth trajectories through only two waves (note that only a straight line can fit to two points). Researchers recommended at least three repeated measurements to obtain more accurate modelling of growth (see, Chan, 1998). In fact,

Ployhart and Vandenberg (2010) argue that a research should have at least three repeated observations to be qualified as a longitudinal study. Therefore, considering the logistics and time limits on data collection, I preferred three-repeated measurement.

2.4.3. Operationalization of change in implicit attitudes toward female leadership: alpha & gamma change

Most longitudinal studies define change as significant mean level differences across repeated measures. However, it is neither sufficient nor meaningful to compare mean scores of a variable measured at multiple times without checking the equivalence of measurement and constructs across time (Chan, 1998; Golembiewski et al., 1976; Ployhart & Vandenberg, 2010; Riordan, Richardson, Schaffer & Vandenberg, 2003; Thompson & Hunt, 1996; Vandenberg & Lance, 2000). Contextual changes and cumulated experience with attitude objects can alter the way people cognize a given construct and the way they respond to measures of the construct. A reliable and valid analysis of attitude change requires the confirmation of the "invariance" of measurement across time. Hence, the equivalence of measurement across time - longitudinal measurement invariance - is accepted as a precondition to hypothesis testing on change in attitudes (Chan, 1998). On the other hand, under the condition of external interventions on attitudes, employees can (implicitly) incorporate new information to their existing attitude following changes in the organizational setting (Thompson & Hunt, 1996). Hence, researcher can sometimes predict the lack of measurement invariance in the context of organizational interventions, such as exposure to a woman leader at work.

In order to explain changes in attitudes and the violations of measurement invariance, researchers (e.g., Thompson & Hunt, 1996) recommended utilizing Golembiewski and colleagues' (1976) alpha-beta-gamma change (ABG) framework. I conceptualize change in implicit attitudes toward female leadership through ABG typology. ABG typology is very useful to capture changes in the attitudes at work, especially where environmental changes are predicted to influence attitudes (Thompson & Hunt, 1996; Vandenberg, 2002). According to ABG framework, gamma change represents changes in the reconstruction and re-definition of the attitude. It is shift in the

attitude concept. Thompson and Hunt (1996) emphasize gamma change while distinguishing levels of change in cognitive structures on target attitudes. They argue that any change in the "strength of associative connections" (p. 685) in mind – that is implicit attitudes - can be examined via gamma change following interventions. Gamma change is, hence, critical for the current context because it may reflect dynamic reconstruction of implicit stereotypes and implicit prejudice toward female leadership after exposure to a female leader. Gamma change can be captured via measurement invariance tests on a) the equivalence of factor structure across repeated measures (longitudinal configural invariance), and b) the equivalence factorial covariance (e.g., Chan, 1998; Epitropaki & Martin, 2004; Ployhart & Vandenberg, 2010; Riordan et al., 2003; Thompson & Hunt, 1996; Vandenberg & Lance, 2000).

Beta change corresponds to the alterations in the meaning of categories and intervals at measurement scales (Vandenberg, 2002; Vandenberg & Lance, 2000). It reflects the lack of equivalence in evaluative or metric scales of measurement instruments across time. It is necessary to establish metric invariance of repeated measures o to avoid biases in the estimation of within person change trajectories, such as latent growth modelling (Chan, 1998). Beta change is often operationalized as a) the in-equivalence of factor loadings across repeated measures (longitudinal metric invariance) and b) the equivalence of factor variances (Ployhart & Vandenberg, 2010; Riordan et al., 2003; Thompson & Hunt, 1996; Vandenberg, 2002; Vandenberg & Lance, 2000). In the current context, beta change refers to the reactivity to repeated assessments of IAT and self-report scales. Indeed, past research indicated that the repeated measurement is problematic for IAT based measures. The test-re-test reliability measures of IATs can be as low as .20 (Lane, Banaji, Nosek & Greenwald, 2007). One interpretation is the relatively higher measurement error of IATs (Cunningham, Preacher & Banaji, 2001). Researchers recommended separating measurement error from estimates by latent variable approach and checking beta change in IAT scores (Cunnigham et al., 2001). I, therefore, analyzed the measurement invariance to control for any beta change across repeated IATs scores.

Alpha change is shift in absolute means. It is only meaningful if there is empirically no gamma change and beta change. Alpha change is operationalized as equivalence of latent factorial means and significant values in hypotheses testing (Ployhart &

Vandenberg, 2010; Riordan et al., 2003; Thompson & Hunt, 1996; Vandenberg, 2002; Vandenberg & Lance, 2000). In the present study, it refers to the significant within person variations in implicit attitudes toward female leadership after establishing the measurement equivalence.

2.4.4. Research context: municipalities in Turkey

Municipality is an interesting research context to investigate implicit attitudes toward female leadership. It is a typical case of pervasive stereotypic and prejudicial attitudes toward women's leadership in Turkey (Fikret Paşa, Kabasakal & Bodur, 2001; Kabasakal, et al., 2011; Kabasakal & Bodur, 2007). Turkish law defines municipality as,

> *"(A) corporation established in the statute of public legal entity having powers of self-government (autonomous) both administratively and financially, to meet the local and common requirements of the country inhabitants and the decision maker of which is elected by the electors."* (Municipal law no: 5393, 2005).

A municipality mayor is the highest authority/leader in municipalities who is the governor and the legal representative of a municipal organization (Municipal law no: 5393, 2005). In Turkey, women gained right to vote and to be voted in 1930 for municipal elections and in 1934 for national elections (Fikret Paşa et al., 2001; Kabasakal, et al., 2011). Despite state's support for women's representation in Republican era, local management has been traditionally pictured as a men's job and women have been underrepresented in municipality mayor roles. Nevertheless, increasing number of women municipality mayors have been elected in recent years. The percentage of elected female municipality mayors was around 0.5% (n = 18) in 2004, reached to 0.8% (n = 26) in 2009 and to 2.7% (n = 37) in March 30, 2014 local election (Mahalli İdareler Genel Müdürlüğü, 2014a; 2014b).

The change in implicit attitudes toward female leadership is a very relevant topic for local management setting because there is a growing public awareness and upcoming debates on women's role as leaders in authority position. The following passage is an illustration of media cover on debates on women at managerial positions after the election:

> *"Mr. Yücel Barakazi (AKP), who won March 2014 local elections as mayor in the city of Bingöl, reported that he decided not to give any authority position to women in the municipality administration. He told, "Appointing women as vice-mayor or similar titles is against our religion, our traditions and customs!" In the following day, a female council member of the municipality, Ms. Nurten Ertuğrul (AKP) resigned in order to protest this attitude. Barakazi responded her by telling that no other woman council members reacted as such and questioned her religiosity as a woman… His attitude was protested by feminist groups."* (Shortened, Report of Bingöl province municipality mayor, 2014).

The passage clearly exemplifies the prescriptive gender norms against women's authority roles in the society. More importantly, it shows the visibility of reactions against stereotypic gender roles in local management, even within a conservative political party.

The first time succession of *women municipality mayors* in March 2014 local elections provided a fruitful and interesting natural field setting to study my research questions. First, unlike most organizational settings, these managers received their official certificates for governance (known as mazbata) around the same period after 2014 elections across all municipalities. Such a context allowed the comparison of municipality employees who started working with female versus male municipality mayor around the same time. Second, the first time selection of women mayors was critical to limit the civil servants' prior exposure to a female municipality mayor. Third, municipality employees seem not to have any control over female candidates and their readiness for a female municipality mayor may not be a priority for centrally located political actors who decide on the mayor candidates. In contrast, top-level managers and employees' prior evaluations about the manager candidates often play role in the selection of managerial candidates in most business setting. Studies on local management in Turkey yielded that central political offices (e.g., political parties) mostly play major role in the nomination of candidates for local management (e.g., Bayraktar, 2007; Bayraktar & Altan, 2012). Although reformed municipality law in 2005 empowered the local authorities, centrally located political actors still dominate the determination of the lists of municipality mayor candidates (compared to local officials or decision makers). Researchers reported that the power balances in the party, candidates' personal networks with central actors as well as their position in ethnic-religious networks in the local community, their financial capital and central actors' sensitivities for internal power balances are often key factors in final candidate

decisions (Bayraktar & Altan, 2012). Hence, I purposefully selected the municipality setting and utilized a control group to avoid any bias potentially arising from the selection of women mayors based on employees' implicit attitudes toward female leadership prior to election.

The case of the latest March 30, 2014 elections, therefore, provided a good opportunity for a longitudinal comparative field study to assess the presence and extent of changes in implicit attitudes toward women's leadership at work setting. In the 2014 Turkish local elections, 1396 municipality mayors were elected in total and only 91 (6.5%) of them officially have female mayors (Mahalli İdareler Genel Müdürlüğü, 2014a).

I sampled civil servants who were working in a metropolitan district municipality where a female mayor was elected in the first time of the history of the given municipality (Mahalli İdareler Genel Müdürlüğü, 2014a; Metropolitan district municipalities, 2015; see Appendix A). Civil servants are full-time and permanent employees of the state, representing more than 50% of all full-time employees of municipalities in Turkey (52.3%, Metropolitan district municipalities, 2015).

Metropolitan district municipality (büyükşehir ilçe belediyesi) refers to a municipality that is located within the boundaries of a metropolitan municipality where its province is a central urban settlement with a population size larger than 750,000 (Municipal law no: 5393, 2005). I focused on metropolitan municipalities, first, because they embody the largest rate of civil servants (44.6%) among all other municipalities. Second, metropolitan municipalities could ease the access to civil servants for repeated measurement and therefore potentially lower attrition rate.

The focus was narrowly on district level municipalities of metropolitans, because metropolitan municipalities (büyükşehir belediyesi) or province municipalities (il belediyesi) have relatively high levels of hierarchy in the organizational structure (Municipal law no: 5393, 2005). District municipalities, on the other hand, have relatively flat organizational structure: a municipality mayor at top, vice-mayor(s), unit managers and unit level civil servants. The lower levels of hierarchy might increase the likelihood of civil servants' interaction with or observation of women mayors, and therefore can enable exposure effect. I elaborate on the sampling of municipalities and

civil servants in the Methodology chapter in detail. I assessed civil servants sampled from metropolitan district municipalities with female mayors (exposure group) and those with male municipality mayors (control group) at three periods with three-month intervals.

2.5. Current Research Variables & Hypotheses

2.5.1. The main effect of exposure to a female leader: the presence of change

I propose that exposure to a female leader can have a main effect on change in implicit attitudes toward female leadership. The term exposure to a female leader refers to working under the authority of female mayor for the first time at municipalities (exposure group). As previously mentioned, the control group involves employees who work with a male mayor. I consider the contextualization argument in implicit change models (Gawronski & Bodenhausen, 2011) as well as the dynamic construction of leadership prototypes in ILTs literature (Lord et al., 2001). At Phase 1 (six months after the election), employees have already been exposed to female municipality mayors in the municipality context. Six-month exposure to a female mayor might have already altered context dependent automatic associations between female and leadership at Phase 1.

Hypothesis 1a. At Phase 1, employees who are exposed to a female municipality mayor (exposure group) will have lower levels of context dependent implicit stereotypic attitudes toward female leadership relative to the control group.

I suspect that even if there would be group differences at Phase 1, change in context dependent implicit stereotyping might continue. This was partially related to the research context. Communications with department directors of municipalities revealed that employees did not have much opportunity to observe mayor's leadership at work (e.g., some were on vacation during the summer period). Therefore, controlling for Phase 1 measures, I hypothesize that the exposure group would have lower levels of context dependent implicit stereotypic attitudes toward female leadership at Phase 2.

Hypothesis 1b. The exposure group will have significantly lower levels of context dependent implicit stereotypic attitudes toward female leadership (at Phase 2) compared to the control group, controlling for Phase 1 attitude measures.

2.5.2. Main effect of exposure to a female leader: the extent of change

I propose a methodological contribution on the examination of longer-term changes in implicit attitudes toward female leadership. I consider the ABG typology of change utilized by organizational scholars (Chan, 1998; Golembiewski et al., 1976; Thompson & Hunt, 1996; Vandenberg, 2002; Vandenberg & Lance, 2000). I hypothesize that exposure to a female municipality mayor may predict significant (alpha) change in the trajectory of employees' generalized implicit prejudice against women leaders across three periods. In contrast, exposure can lead to implicit level re-conceptualizations about female leadership phenomenon as indicated by gamma changes in scores of generalized implicit prejudicial attitudes (accounting for beta change).

Hypothesis 1c. Exposure to a female mayor will predict significant gamma change in generalized implicit prejudicial attitudes toward female leadership across three phases.

Hypothesis 1d. Exposure to a female mayor predicts significant within person variation (alpha change) in generalized implicit prejudicial attitudes toward female leadership across three phases.

2.5.3. The mediating role of context dependent implicit stereotyping

The context dependent implicit stereotypic attitudes can mediate the relation between exposure and generalized implicit prejudice against female leadership. At lengthy exposure to a female leader, changes in the municipality context-dependent automatic associations can be generalized to other contexts. We can observe such generalization through changes in generalized implicit prejudicial attitudes female

leadership. As I argued before, lengthy exposure to a female mayor can give way to the repeated activation of ties between female and municipality leadership in mind. Such repeated activation can cumulatively alter the valence of automatic cognitions about women leaders (Gawronski & Bodenhausen, 2011; Olson & Fazio, 2006; Rydell & Gawronski, 2009). The changes in the valence of automatic cognitions might be reflected on mean level variations as well as gamma changes in the generalized implicit prejudicial attitude toward female leadership. I hypothesize that the level of context dependent automatic association between female and leadership at Phase 2 (controlling for Phase 1) might predict within person variations in generalized implicit prejudicial attitude toward female leadership across three periods.

> *Hypothesis 2a. Controlling for Phase 1 implicit stereotyping, the level of municipality context dependent automatic association between female and leadership (at Phase 2) will predict within person variations (alpha change) in generalized implicit prejudicial attitudes toward female leadership across three periods following exposure to a female mayor.*

> *Hypothesis 2b. Controlling for Phase 1 implicit stereotyping, the level of municipality context dependent automatic association between female and leadership (at Phase 2) will predict gamma changes in generalized implicit prejudicial attitudes toward female leadership across three periods following exposure to a female mayor.*

I further posit that such generalization process might involve the mediating effect of context dependent changes in implicit stereotyping on the relation between exposure and generalized implicit prejudice toward women's leadership at Phase 3.

> *Hypothesis 2c. Controlling for Phase 1 measure, implicit stereotypic attitude toward female leadership (at Phase 2) will mediate the relationship between exposure to a female mayor and generalized implicit prejudice toward female leadership (at Phase 3).*

The prolonged exposure and diverse experiences with a woman leader might be challenging for existing cognitions about female leadership. Connectionist framework (e.g., Dinh & Lord, 2012) contends that the cumulative effect of regular activation of paths eventually alters the content and associative structure of implicit leadership neural

network (that is, change in the content of implicit leadership theories). This can result in the changes in the associate network of implicit attitudes toward female leadership.

2.5.4. The leadership prototype as mediator of change in generalized implicit prejudice toward female leadership

A relatively low level of sensitivity characteristics in the content of ILTs contributes to higher perceived mismatch between gender and leadership roles in the immediate context. This can potentially result in higher prejudice against women leaders as predicted by role congruity theory (Eagly & Karau, 2002). Exposure to a woman leader and context dependent automatic association between female and leadership, on the other hand, can provide opportunities for the repeated activation of feminine/sensitivity characteristics in leadership prototypes in the immediate work context. According to the connectionist framework of ILTs, the chronic activation of prototypes that had formerly weak associations with context cues might alter the structure of connectionist framework (Dinh & Lord, 2012; Foti et al., 2008; Hogue & Lord, 2007; Lord et al., 2001; Lord & Hall, 2003; Lord & Shondrick, 2011; Scott & Brown, 2006). ILTs content might involve more feminized characteristics. Role congruity theory predicts that sensitivity/femininity characteristics in leadership roles are congruent with stereotypical female gender norms. It can decrease implicit prejudice toward female leadership at a generalized level.

Though connectionist framework proposed the malleability of ILTs, to date few studies have tested field level longitudinal change in ILTs (e.g., Epitropaki & Martin, 2004; 2005). Epitropaki and Martin (2005), for example, examined within person changes in ILTs scale after one-year period and reported no significant within person differences on scale points. The authors explained that their respondents might not have been exposed to significant contextual changes that might have challenged their ILTs.

The present study tests change in the content of employee ILTs following a natural field level intervention – i.e., contact with a female leader at work setting. Municipality context might alter the context dependent activation patterns of leadership prototypes, but does not necessarily alter the content of leadership prototypes (Foti et al., 2008). In a longer-term exposure to a female mayor, the activation of female and

leadership at municipality work setting can activate feminine/sensitivity characteristics in leadership prototypes of employees (Hogue & Lord, 2007). The accumulation of such repeated prototype activation might make the associations of feminine/sensitivity characteristics in prototype stronger in the connectionist network, leading to higher levels of feminine prototype content, such as higher sensitivity. The higher cognitive association between municipality context and feminine/sensitive characteristics in leadership prototypes can decrease the perceived mismatch between female gender and leadership roles. The lower perceived role incongruence can diminish prejudice against a woman leader in general as predicted by role congruity theory (Eagly & Diekman, 2005; Eagly & Karau, 2002). I hypothesize that the sensitivity characteristics of leadership prototypes will mediate the relationship between context dependent implicit stereotyping and generalized implicit attitudes. The context dependent changes in implicit stereotyping (higher automatic activation of female and leadership) will be positively linked with feminine/sensitivity characteristics in leadership prototypes, which can predict lower perceived role incongruence and lower implicit prejudicial attitudes toward female leadership.

Hypothesis 3a: The level of municipality context dependent automatic association between female and leadership (at Phase 2) will be positively related to sensitivity characteristics of leadership prototypes (at Phase 3) in the exposure group compared to the control group.

Hypothesis 3b: The level of sensitivity characteristics in leadership prototypes (at Phase 3) will be negatively related to generalized implicit prejudice toward female leadership (at Phase 3) in the exposure group compared to the control group.

Hypothesis 3c: The level of sensitivity characteristics in leadership prototypes (Phase 3) will mediate the relation between municipality context dependent implicit stereotyping (at Phase 2) and generalized implicit prejudice toward female leadership (at Phase 3) in the exposure group compared to the control group.

2.5.5. Perceived leader success as a moderator of the malleability of implicit attitudes toward female leadership

In addition to mediating effect of leadership prototypes, I postulate that employees' perception on mayors' leadership characteristics, employees' interactions with them as well as employees' gender identity may alter the variations in implicit stereotypic and prejudicial attitudes toward female leadership. I propose the leader success as one of the perceived characteristics of the leader which might moderate the exposure's influence over implicit attitudes toward female leadership.

The perceived leader success corresponds to employees' subjective evaluation on the general performance of municipality administrative responsibilities and public services at Phase 2 in the current context. The main responsibilities of a mayor are the general governance of the municipality and protecting its rights and interest (Municipality law no: 5393, 2005). The law states that they should be developing strategies for municipality activities as well as personnel management (e.g., appointing municipality employees). Municipality management is also responsible for managing services for the local citizens' health, peace and well-being (e.g., social activities, construction, and waste management within municipality boundaries). Informal conversations with employees in municipalities revealed that employees track the performance directly by observing mayors' decisions, behaviors and success stories (e.g., following social media) as well as indirectly by municipality's services and activities.

From the perspective of intergroup contact theory (Pettigrew & Tropp, 2006), the perceived success of municipalities might emphasize the counter-stereotypic stance of a female mayor, and therefore might increase exposure's influence on implicit stereotyping. Indeed, as mentioned before, past experimental studies exposed respondents mostly to successful women leader figures to investigate the effect of exposure on stereotypes toward women or women's leadership (e.g., Beaman et al., 2009; Blair et al., 2001; Dasgupta & Asgari, 2004; Hugenberg et al., 2010; Lenton et al., 2009). Similarly, considering the predictions of APE model (Gawronski & Bodenhausen, 2006), the success of a female mayor constituted pleasant experiences with her and therefore would cumulatively challenge implicit cognitions contextualized for a given setting over time. Taken together, one may claim that the perceived success

of the mayor will increase the exposure's impact on the context specific implicit stereotyping toward female leadership.

Counter-arguments can rise based on the rationalized success phenomenon reported in the role congruity literature (Eagly & Carli, 2003; Heilman, 2001; Heilman & Haynes, 2005). The perceived success of the female mayor may not necessarily influence the relationship between the exposure and the context dependent implicit stereotyping toward female leadership. As argued by the role congruity approach (Heilman & Haynes, 2005; Kulich et al., 2007), women's successful performance in male sex typed position such as leadership at top levels can breach prescriptive gender roles (Eagly & Carli, 2003; Heilman & Haynes, 2005; Kulich et al., 2007). Therefore, employees undervalue the contributions of women leaders and therefore may not attribute any organizational success to women leaders. Heilman and Haynes (2005) empirically indicate this rationalization of success in their experimental study. In their study, respondents evaluated the performance of female and male members of a successful team without clear information on the source of success. Respondents tended to give more credit to male members' contribution in a male sex typed task (i.e., creating investment portfolio) and rated female team members lower in leadership roles. The source of success is often ambiguous in municipal organizations potentially creating room for such a rationalization of mayoral success. Then, one may assert that the perceived success of the female mayor may not necessarily influence the exposure's impact on implicit attitudes toward female leadership.

Taken together, considering the intergroup contact theory and the APE model, I hypothesize that employees who are working under the authority of female mayor and cumulatively perceive higher levels mayor's success at Phase 2 might experience lower municipality context dependent implicit stereotyping at Phase 2, controlling for Phase 1 measure of implicit stereotyping. Despite of this formal hypothesis, I will keep in mind the ILTs arguments and the rationalized success views that the perceived success of female mayors may not necessarily alter the implicit stereotyping following the first time exposure to a female mayor.

Hypothesis 4. The perceived success of female mayor (Phase 2) will moderate the relationship between exposure to a female mayor and municipality context dependent implicit stereotyping toward female leadership (at Phase 2), controlling for Phase 1 measure. The higher the perceived success of female mayors, the more likely that exposure will be related to higher cognitive associations between women and leadership.

2.5.6. Perceived communal and agentic characteristics of leaders as moderators of the malleability of implicit attitudes toward female leadership

In addition to the perceived success of the female leader, the employees' perception of agentic and communal characteristics of female leader can matter. Women managers need to show masculine/agentic characteristics to be qualified as leaders. For example, female managers who are seen as brave and strength were more likely to be categorized as effective leaders (e.g., Eagly & Carli, 2003; Scott & Brown, 2006). I observed this tendency in an informal conversation with a municipality employee:

> "*She (female mayor) is a totally strong woman. And brave. The last month she attended a village wedding (as the representative of the municipality). During celebrations, men started to fire gun into the air (for fun). They were very close to our (municipality employees) table. We (as women in the group) were afraid of it, hided under the tables, but she stood still, no sign of fear at all. We were totally impressed by her braveness as a mayor.*" (A female employee, the private secretary office, 29).

Rudman and colleagues (2012) suggest that women managers' agentic behaviors and characteristics (e.g., confidence, competitiveness, power, or capability) might be critical for women managers' categorization as leaders. However, they are paradoxically potential violators of prescriptive gender norms. Therefore, women leaders' agentic characteristics can lead to backlash effect, resulting in high negative reactions against women's leadership and therefore generalized as high prejudice toward female leadership. Particularly men could react against women's leadership and show backlash effect because of not only the violation of stereotypic gender roles, but also the breach in status expectations. Rudman and colleagues (2012) argue that people are motivated to legitimize existing social hierarchies and status differences. Most cultures and societies believe and expect men to be in higher status positions, but not females (e.g., "women

should not be in high status positions"). If women act as "too powerful" or dominant, this can violate status expectations from women. Status incongruity perspective (Rudman et al., 2012) asserts that people may, therefore, devalue women leaders' contributions and do not attribute success to them. They show prejudicial attitudes toward female leaders to restore status expectations.

Recent explanations, however, indicate that the presence of agentic characteristics and behaviors may not necessarily result in backlash effect. The presence of both agentic and communal characteristics (e.g., warm, kind, friendly, caring, or supportive, understanding) of women leaders can suppress prejudice against women leaders, and create female advantage in today's management practices (Eagly & Carli, 2003; Johnson et al., 2008; Rosette & Tost, 2010). As a support of this argument, Johnson and colleagues (2008) illustrated that gender-inconsistent behavior (e.g., showing strength) does not always result in disliking of women leaders. Researchers investigated US undergrad students' evaluations on masculine/agentic versus feminine/communal characteristics of hypothetical leaders. In line with the predictions of role congruity theory and backlash effect, they found that the lack of gender consistent behavior (e.g., insensitivity to others emotions) leads to negative evaluations – disliking - of hypothetical women leaders. Backlash effect might be occurring because the lack of communal characteristics but not the presence of agentic characteristics is violating the prescriptive female gender norms. The absence of agentic characteristics (e.g., strength) in female hypothetical leaders was also negatively evaluated, since it breaches leadership norms. However, Johnson and colleagues (2008) reported that if a woman leader has both communal behavior (e.g., sensitivity) and leader-consistent attributes (e.g., strength), she would be evaluated as more effective and likable due to the adherence to descriptive and prescriptive gender and leadership norms.

At the implicit attitudinal level, the balance of communal-and-agentic leadership characteristics might influence automatic association between female and leadership in a given context by adhering to expectations from leaders especially for the current research context, Turkey. A leadership style – paternalism, which is characterized by authority, discipline as well as fatherly benevolence - is a prevalent style in Turkish business context (Aycan, 2006). People expect from a leader to show a "parent/father figure" through individualized concern, support and care to his/her followers' well-

being at work and at familial life. Women managers who have benevolent forms of paternalism were evaluated as more effective (e.g., Wang, Chiang, Tsai, Lin & Cheng, 2013). I believe that female managers who are balancing agentic-and-communal characteristics might be adhering to common expectations from leaders in the Turkish context. I, therefore, predict that the attribution of both agentic and communal leadership characteristics to female leaders might increase the likelihood of associating leadership with women, lowering the implicit stereotyping toward female leadership.

Past research also indicated that the advantage of a balance in communal and agentic characteristics for women leaders might depend on context (Eagly & Carli, 2003). One study reveals that the context of top-level management sustains female advantage in leadership through supporting high status of female leaders the eyes of followers and avoiding the perceived status incongruity (Rosette & Tost, 2010). If women leaders occupy top managerial level positions (Rosette & Tost, 2010) and are perceived to act in a relatively modest way, "walk a fine line between presenting themselves as qualified for leadership while side-stepping perceived violations of (status expectations)" (Rudman et al,. 2012; p. 176), then they can buffer the backlash effect in the eyes of followers.

I posit that the balance in communal-and-agentic characteristics particularly in top managerial levels - such as the highest authority in a district municipality - can be generalized to female leadership and resulting in lower implicit stereotyping toward female leadership. As claimed by female advantage argument, communal as well as agentic characteristics of female leader can decrease the likelihood of the backlash effect by limiting the breach in prescriptive gender roles as well as by legitimizing the high status of female leaders. If employees observe high communal and high agentic leadership characteristics of a female leader, this can increase the repeated and simultaneous activation of both female and leadership. Such context dependent activation might respectively increase the likelihood of the context dependent automatic association of women and leadership, resulting in decreased implicit stereotyping. It can also avoid the backlash effect and therefore potentially deter any generalized increasing trajectory of implicit prejudice toward female leadership.

The balance of agentic and communal characteristics is relevant for the current research setting. The formal responsibilities of municipality mayors necessitate the

effective management of municipality activities and personnel as well as the consideration of well-being of its internal and external stockholders (e.g., district citizens) (Municipal law no: 5393, 2005). A quote from the press speech of newly elected female mayor of Mihalgazi district municipality, Eskişehir exemplifies a balanced approach:

> *"After elections, municipality services, for example waste collection management, are becoming more effective. Municipality environment will look different and new services for women's needs and expectations will be managed so that everyone will know that women are in charge of the municipality… I am cautious of avoiding role conflict between being a woman and leader and being just as a manager in Mihalgazi municipality. (She wears headscarf) I would not have believed if someone told me 15 years ago that a woman who wears a headscarf is going to be a municipality mayor. One should not and I won't give up our fight during my administration (against protests for wearing head scurf at public management positions)."* ("Female mayor wearing a shalwar was focus of attention", 2014)

She emphasized both communal/feminine (e.g., creating a clearer environment, services for women) as well as agentic (e.g., fight for rights) characteristics. Another example (mayor of Konak municipality, Izmir) highlights the female mayor's team-orientation and participative approach, as previous empirical findings demonstrated as feminine and communal characteristics (e.g., Eagly & Carli, 2003; Schein, 2001):

> *"Our first job is going to be getting rid of locks on doors (of the municipality building and top management offices), because we are creating a municipality for everyone's active attendance. We do not need any locks; we will open our doors (figuratively our room, and our decisions) for everyone else. We are going to manage the municipality all together. This is one of the first steps of being a large Konak family."("First practice of the female mayor", 2014)*

In sum, I postulate that communal and agentic characteristics of women municipality mayors can moderate the effect of exposure on context dependent as well as generalized implicit attitudes toward female leadership. I predict that both high communality and high agency of municipality mayors might increase the positive relationship between exposure and context dependent automatic association between female and leadership (that is lower, implicit stereotyping).

> *Hypothesis 5: The perceived communal as well as agentic characteristics of the female mayor (Phase 2) will moderate the relation between exposure and municipality context dependent implicit stereotypic attitudes toward female leadership (at Phase 2). The higher the levels of communal as well as agentic*

characteristics, the more likely that exposure will predict higher automatic association between female and municipality leadership.

I also explore whether the cumulated observation of high levels of communal and agentic leadership characteristics will moderate the relation between exposure and generalized implicit prejudice toward women's leadership. High communality and high agency can contribute to the generalization of contextual experiences with immediate women mayor, potentially creating changes in implicit prejudicial attitudes toward female leadership.

2.5.7. Quantity and quality of interaction with the leader as moderators of the malleability of implicit attitudes toward female leadership

Another potential determinant of exposure's effect on implicit attitudes toward female leadership can be subjective interaction with female leader (Uhl-Bien et al., 2014). My research model suggests that the quantity and quality of interaction with leader might moderate the effect of exposure to a female mayor on context dependent implicit stereotypic attitudes toward female leadership. The quantity of interaction refers to the frequency of direct and indirect conversation with mayors. The field observations revealed that municipality employees are having a variety of opportunities to interact with the mayor. Especially in small municipalities, the employees are observing and communicating with the mayor on the daily basis, whereas in the larger organizations, the interactions are on monthly basis or less. I, therefore, expect that the quantity of interaction with the female mayor might intensify the exposure's influence over implicit stereotyping and implicit prejudice toward female leadership.

The quality of interaction with the leader refers to as a) the level of leader-member exchange (LMX; Graen, Novak & Sommerkamp, 1982; Graen & Uhl-Bien, 1995) and b) the perceived interactional justice of mayor (Bies & Shapiro, 1987; Moorman, 1991). LMX is usually identified to explain the quality of relationship between leaders and their subordinates (Dulebohn, Bommer, Liden, Brouer & Ferris, 2012; Graen & Uhl-Bien, 1995; Uhl-Bien et al., 2014; Thomas et al., 2013). Accordingly, leaders tend to have varying degrees of relationship with different followers. Leaders may interact with some followers in a formerly agreed way (low

LMX relationship), whereas they might develop a relationship in which both leader and follower feel mutual obligation and reciprocity (e.g., trust, loyalty, commitment) toward each other (high LMX relationship). A recent meta-analysis on LMX reveals that high interaction frequency and mutual positive feelings such as liking coincide with high LMX relationship (Dulebohn et al., 2012). High LMX relationship between the leader and his/her subordinate was found to predict favorable work outcomes for subordinates, and positive evaluation of leaders, such as satisfaction with supervisor (Dulebohn et al., 2012). The following passage is an excerpt from my informal conversation with a municipality employee in a relatively small municipality and demonstrates the relevance of exchange relationship in the current research context:

> *"She (the mayor) is like our elder sibling. We do not call her as "Başkanım" (Mrs. Mayor, formal term used to address a mayor), but as "Sibling (Abla)" even in our formal meetings… I feel comfortable to ask her about anything – including my official paper work or my private issues. For example, if a doctor prescribes a medicine to me, I first ask her whether to use it or not before taking it. If I have a problem, for example, with my child, I first consult to her how to behave to him/her. And I am not an exception, most officers are like that.*" (Male employee, finance department, 42).

In addition to exchange relations with the female leader, employees' perception about her fairness might also influence the subjective positive or negative interactions with the leader. I focus on leader's interactional justice and particularly its interpersonal variant (Colquitt, Conlon, Wesson, Porter & Ng, 2001), which is related to beliefs and perceptions about leader's treatment of one with dignity, respect and courtesy (Bies & Shapiro, 1987; Bies, 2001; Moorman, 1991). Employee might perceive the leader as just or unjust if they directly or indirectly associate the leader with fair or unfair interpersonal treatment of employees (Umphress, Simmons, Folger, Ren, & Bobocel, 2013). The perceptions on the interpersonal fairness of the leader can lead employees to experience positive feelings toward the leader, such as trust (Colquitt & Rodell, 2011).

I contend that frequent and high quality interaction with the leader through exchange relations and perceived fairness of the leader in interpersonal relations can increase exposure's effect on context dependent implicit stereotyping as well as generalized implicit prejudice toward female leadership. Frequent interaction can provide opportunities for personal interaction with the leader and the observation of leader behaviors. More frequent and closer interaction with a female leader on daily work basis might make female leaders familiar to the person as suggested by

interpersonal contact hypothesis (Pettigrew, 1998) and hence familiarity can challenge stereotypical attitudes toward female leadership. At implicit level, such frequent experiences can lessen the probability of prototype-based categorization of leaders, easing the change in cognitive schemata (Hogue & Lord, 2007). Indeed, past research showed that one's positive affective experiences could promote cognitively flexible judgments /evaluations and increase one's openness to new ideas about the attitude object (Forgas & George, 2001).

Employees' positive experiences through perceived high quality exchange with the female leader and the perceptions regarding her personal fairness can further make the mental associations of women's leadership positive and therefore can aid lowering implicit prejudice against female leadership in a longer term. The argument on positive experiences is one of the basic optimal conditions of Allport (1954/1979) for prejudice reduction and found as a facilitator of the exposure effect on challenging prejudice against social groups (Pettigrew & Tropp, 2006). At the implicit level, a relatively long period of pleasant contact with female leadership can alter the valence of association between female and leadership. This is one of the basic predictions of EC model (Olson & Fazio, 2006) and APE model (Gawronski & Bodenhausen, 2006) in implicit prejudice reduction as discussed before. After contact with a female leader, the cumulated and repeated pleasant experiences can make the association of female leaders and positive cues in the connectionist leadership network stronger in mind. Such positively conditioned cue is expected to elicit more positive conditioned response toward female leadership. We can observe it as less implicit prejudicial attitudes toward female leadership. I propose that the negative image of the female manager, on the other hand, might not challenge the prevalent implicit prejudice toward female leadership. In fact, the repeated association of female leaders with the negative image of female manager can increase the negative valence of women's leadership, which we can observe through higher implicit prejudicial attitudes toward female leadership.

Considering these arguments, I, first, contend that the frequent and high quality subjective experiences with the mayor might increase the relationship between exposure and lower levels of context dependent implicit stereotypic attitudes toward female leadership. As discussed previously in detail, pleasant experiences with a woman leader can cumulatively increase the activation of female and leadership in mind, and therefore

resulting in lower implicit stereotyping against female leaders at the immediate work context.

Hypothesis 6a. Frequent interactions with a female mayor (Phase 2) will moderate the relationship between exposure and context dependent implicit stereotypic attitudes toward female leadership (at Phase 2). The higher the frequency of interaction, the more positive will be the relationship between exposure and automatic association between female and leadership in municipality context.

I, second, suggest that positive and frequent interaction might increase the likability of female leaders (Pettigrew & Tropp, 2006). Frequent pleasant experiences can make the valence of female leaders in general positive from the perspective of EC (Olson & Fazio, 2006) and therefore can increase the probability on the generalization of context dependent implicit stereotyping. I predict that, in a longer-term exposure, the accumulation of frequent and positive experiences could moderate the relationship between context dependent implicit stereotyping and generalized automatic association between female leadership and positive cues (implicit prejudice).

Hypothesis 6b. High quality interactions with the female mayor (Phase 2) will moderate the relation between exposure and context dependent implicit stereotypic attitudes toward female leadership (at Phase 2). The higher the high quality interactions, the more will be the positive relation between exposure and automatic association between female and leadership in municipality context.

Hypothesis 6c. High quality interactions with the female mayor (Phase 2) will moderate the relation between exposure and generalized implicit prejudicial attitudes toward female leadership (at Phase 3). The higher the high quality interaction with the female mayor, the more positive will be the relationship between exposure and automatic association between female leadership-positive cues.

2.5.8. Employee gender and gender role identity

In addition to leadership characteristics and perceived relationship with the leader, employee gender and gender role identity might also matter in predicting change in implicit attitudes toward female leadership. It is essential to examine the malleability of implicit attitudes toward female leadership for male versus female groups. Men's versus women's higher stereotypic/prejudicial attitude and potential resistance toward interventions on implicit attitudes toward female leadership are very critical issues for policy makers and for leadership literature (Koenig et al., 2011). Most decision makers who promote (or mostly prefer not to promote) women in leadership positions are men. Any empirical evidence for or against the malleability of their implicit attitudes toward female leadership can inform us about potential decision makers' implicit evaluations about women managers at work.

Despite of such importance of gender differences, gender difference on attitudes toward women's leadership is not theoretically clear. Some studies reveal no gender differences on attitudes toward female leadership. For example, Heilman and Haynes (2005) reported that both males and females tended to devalue the leadership roles and competence of female team members at similar rates. Similarly, Joshi (2014) illustrated that male and female project members did not differ in terms of devaluing women authority experts in groups. In another example, although Beaman and colleagues (2009) reported gender difference in implicit prejudice, they found decreases in male as well as female Indian voters' explicit bias (i.e., perceived leader effectiveness) and implicit bias (i.e., gender-leadership occupation associations) against female political leadership after two year exposure to a female leader.

On the other hand, some views suggest men are more stereotypical/prejudicial attitudes against female leadership (e.g., Beaman et al., 2009; Duehr & Bono, 2006; Eagly, Makhijani & Klonsky, 1992; Koenig et al., 2011). This is explained by higher rates of sexist attitudes (e.g., "women are weak", women are not clever") among men compared to women (Glick & Fiske, 1996) as well as their perceived threat to status (Rudman et al., 2012). Men are more likely to have sexist attitudes and therefore are less likely to prefer or like women leaders. Moreover, a woman leader who occupies traditionally male dominated position might be threatening for the masculine identity of

males (e.g., Joshi, 2014). In a traditionally male dominated position, a woman leader might challenge men's status expectations. According to status incongruity argument (Rudman et al., 2012), women's positioning in high status – i.e., leadership- may breach norms of social status, resulting in backlash effect. Working under the authority of a female might threaten their status and identity (manhood) for men, resulting in men's higher prejudice (e.g., disliking) of women in authority positions. In contrast, women might experience higher positive attitudes toward female leadership compared to men, because they favor same sex leader. This pertains to similarity attraction hypothesis, which suggests positive evaluations and liking of others that are similar to one.

Past studies, indeed, support the stereotypic/prejudicial inclinations of men against women's leadership. For example, one study demonstrates that men are quicker to pair authority roles with male names, while subordinate roles with female names compared to women (Rudman & Kilanski, 2000). This implies males' higher implicit stereotyping toward female authority figures, compared to women. Similarly, men are also found as more resistant to change in stereotypic/prejudicial attitude toward women's leadership, whereas women often have higher automatic biases in favor of their in-group (women group) (e.g., Rudman & Goodwin, 2004). Studies reported that counter-stereotyping manipulations (e.g., imagining a counter-stereotypical female figure) can significantly reduce implicit biases of female participants against women leaders, but this is not found for men (e.g., Blair et al., 2001). In the longitudinal field experiment of Beaman and colleagues (2009), male Indian villagers report no change while female citizens had lower within person levels in their implicit prejudice against female leaders.

Contradictory findings highlight a need for closer examination of implicit attitudes toward female leadership from the perspective of follower gender. I predict that such conflicting findings can be resolved by considering gender identity. I define gender identity as one's perception of self through gender roles (Bem, 1974). Accordingly, an individual can encode and organize information about self in terms of culturally defined roles of males and females. This reflects sex typing in the definition of self: a high identifier female perceives self as feminine, whereas high identifier male as masculine. In their meta-analysis, Lenton and colleagues (2009) report that interventions on the automatic stereotyping toward women might not always change the cognitions of

females who are identified with their gender roles, resulting in lack of gender differences on implicit gender stereotyping.

The higher identification with gender roles increases the saliency of stereotypic gender norms (Bem, 1974; Wood & Eagly, 2015). The saliency of gender norms and cues can lead people to attend gender while evaluating female leaders. This can potentially lead people to perceive higher breach of prescriptive gender norms (Heilman, 2001). The perceived breach of prescriptive gender norms can result in higher prejudice against women leaders as claimed by backlash effect (Rudman & Glick, 1999; 2001) and role congruity theory (Eagly & Karau, 2002). Joshi (2014) also conveyed this argument. In her study, high gender-identifying men and women project members devalued the expertise of female experts in teams. Joshi (2014) explained this result in terms of higher saliency argument and perceived breach in prescriptive gender norms.

Taken together, I posit that gender identity of male and female followers might influence context dependent changes in implicit stereotyping as well as change in generalized implicit prejudice against female leaders. High gender identity might increase the salience of gender cues during the evaluation of female leadership. Increased salience of female leader gender can potentially increase the perceived incongruence between female gender roles and leadership roles. I predict that higher gender identifiers tend to show the lower within person changes in generalized implicit prejudice toward female leadership compared to low identifiers.

Hypothesis 7a: The association between female mayor exposure and the context dependent automatic association between female and leadership (Phase 2, controlling for Phase 1) will be lower for high gender identifier employees compared to low identifiers.

Increased saliency of gender roles might lead to higher likelihood of breach in prescriptive gender norms, leading to backlash effect. In a longer-term exposure, a female authority figure might be seen as threatening the status expectations and male's manhood. All these forces may act against change in generalized implicit prejudicial attitudes toward female leadership for high identifier respondents after exposure to a female mayor.

Hypothesis 7b: The association between exposure and the within person variation in generalized implicit prejudicial attitudes toward female leadership will be lower for high gender identifiers compared to low gender identifier employees.

I will also explore the role of participant gender in relation with their gender identity. I will also explore the moderating role of participant gender in previously proposed mechanisms of change in implicit stereotyping and implicit prejudice toward female leadership.

3.

METHODS

This section describes and discusses the methodology of the dissertation research. In order to test the proposed hypotheses, I conducted a three-wave longitudinal field study with three-month intervals. The previous section already discussed the rationale of the research context and time intervals in the longitudinal design. The current methodology section, first, describes the sampling procedure and the characteristics of the participants. Second, it presents the measures and the instruments. I specifically present the methodological and psychometric issues regarding implicit association tests (IATs) in detail. Then, I outline the data collection procedure, and the data analytical plans.

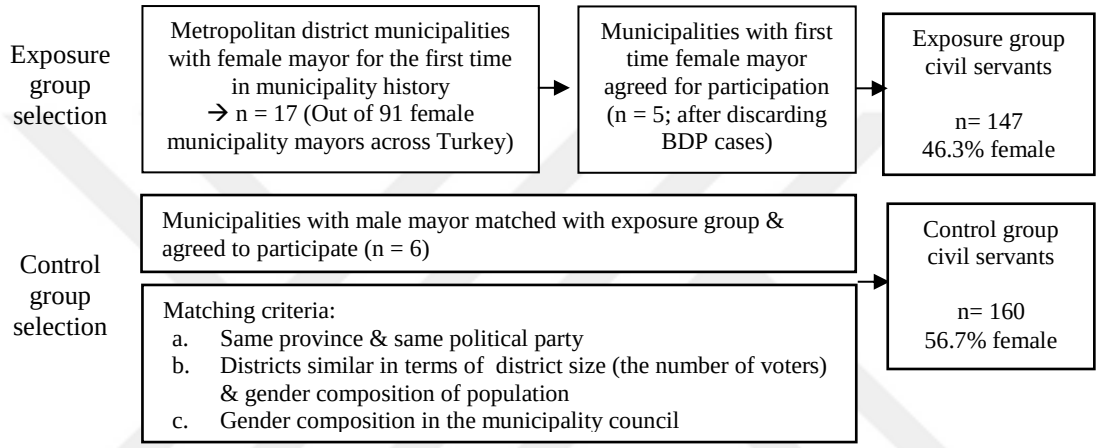
3.1.Participants and Sampling Procedures

I recruited participants among employees of district municipalities of metropolitan cities in Turkey. Three hundred sixty seven municipality civil servants (53.1% female) participated in the study. Figure 3.1 depicts the sampling procedures that are explained in the following sections in detail.

To determine the exposure group, I invited all target municipalities with first time female mayor (n = 17; presented on Appendix A) to the study via e-mail, phone and/or acquaintances in political parties. I discarded BDP municipality cases from further invitations based on communications with BDP/HDP employees as well as scholars of municipalities in Turkey. Severe political turmoil in the southeast region at the beginning of the first phase (November 2014) was one reason. Another reason was the co-mayor system in BDP, which requires both male and female managerial representatives (e.g., mayors in municipalities). The co-mayor system could have blurred sole exposure to female mayors. Among the other municipalities that were

contacted, municipality employees in Güdül (Ankara, AKP), and Urla (İzmir, CHP) rejected my invitation to the study. Employees in Meram (Konya, AKP) and Mihalgazi (Eskişehir, AKP) did not respond my invitation via phone/e-mail. Municipalities of Kalecik (Ankara, AKP), Bozkurt (Denizli, CHP), Avcılar (İstanbul, CHP), Konak (İzmir, CHP) and Kiraz (İzmir, MHP) gave permission for sampling employees in their municipalities for the current study. They, therefore, composed the current municipality sample with first time female mayor (n =5).

Figure 3.1.
Sampling Procedure



I utilize a matched control group sampled from the pool of municipalities with male mayors located in the same provinces of the exposure group (Ankara, Denizli, İstanbul & İzmir, see the list of municipalities in Appendix B). The control group was to account, first, for the history effects (Shadish, Cook & Campbell, 2002). During the data collection phases, events that co-occur with exposure to female leader (such as media covers of gender equality issues in the country) might have simultaneously altered implicit attitudes toward female leadership. A control group that was under the similar environmental influence might have limited such alternative explanations. The matching method was to control regional and municipal characteristics that might create baseline differences on general attitudes toward women in authority positions as well as employees' proneness to alter their implicit cognitions about women's leadership. I tried to select a control group, which would have similar characteristics with the exposure group in terms of the following matching criteria.

Same political party: To account for political party level differentiation on municipalities' ideological orientations (e.g., Bayraktar, 2007; Kalaycıoğlu, 2007;

Kalaycıoğlu, 2015; Matland & Tezcür, 2011), for example on gender issues, I selected municipalities that were matched in terms of their affiliated political parties.

Municipality location and population size: Target municipalities presented in Appendix B were scattered around a large geographical area with diverse sizes of district population. Given that more rural areas and smaller districts are usually associated with traditional attitudes toward women in general (Judge & Livingston, 2008), I sampled control group from the same provinces of exposure group municipalities and from districts with similar population size.

Gender composition of the population and municipality council: Gender composition of the district population and of municipality council could be proxies for district and municipal level attitudes toward female mayor candidates. Gender composition was argued to reconstruct the perceived gender differences and gender identities, particularly in managerial levels of organizations (e.g., Cohen & Broschak, 2013; Ely, 1995). For example, in her qualitative and quantitative studies, Ely (1995) found less stereotypical view of females in cases where women are represented at high levels of the organizational hierarchy. Gender composition might similarly be a proxy for public and municipality level attitudes toward women at management. Therefore, I tried to match exposure group versus control group in terms of gender composition of district population and municipality council. Gender composition of the district population is defined as the ratio of female citizens to males. Gender composition of the municipality council reflects the ratio of female municipality council members to male members.

I invited all municipalities with male mayors who approximately met matching criteria. Appendix B lists depicted invited ones (in bold). I received permission to collect data from the following municipalities: Ayaş and Altındağ[1] (Ankara, AKP; matched for Kalecik), Buldan (Denizli, CHP; matched for Bozkurt), Ataşehir (İstanbul, CHP; matched for Avcılar), Çiğli (İzmir, CHP; matched for Konak) and Aliağa (İzmir, MHP; matched for Kiraz). Table 3.1 demonstrates the list of final municipality sample, the gender of municipality mayors, municipalities' political party, their vote ratio, the population demographics of districts and the characteristics of municipality councils.

[1] I got permission only from Altındağ (AKP, Ankara) in Ankara as the match group of Kalecik (AKP, Ankara) on November 2014. The population and municipality size of Altındağ municipality was larger than Kalecik. At the end of data collection at Phase 1, I got access to Ayaş (AKP, Ankara) where population and organizational size were more congruent with Kalecik. I kept both Altındağ and Ayaş in the sample.

Table 3.1.

Characteristics of Municipalities (Metropolitan district municipalities, 2015; Municipal law no: 5393, 2005; Local management database, 2014): Those with Female Mayor Represented Exposure Group & Those with Male Mayor Represented Control Group

Municipality	Mayor gender	Affiliated Party	Party's vote ratio	District population			Municipality council					
				N	Female	%	N	% of female members	% of members of mayor's affiliated party	Frequency of AKP members (females)	Frequency of CHP members (females)	Frequency of MHP members (females)
Ankara - Kalecik	Female	AKP	56.69 %	13678	6800	49.71%	11 (0)	0.00%	72.73%	8 (0)	1 (0)	2 (0)
Ankara - Ayaş[1]	Male	AKP	48.90 %	12997	6518	50.15%	11 (0)	0.00%	54.55%	6 (0)	4 (0)	1 (0)
Ankara Altındağ[1]	Male	AKP	63.63 %	359597	178945	49.76%	37 (9)	24.32%	81.08%	30 (9)	7 (0)	0
Denizli-Bozkurt	Female	CHP	36.24 %	12279	6657	54.21%	11 (0)	0.00%	45.45%	0	5 (0)	6 (0)
Denizli-Buldan[2]	Male	CHP	29.72 %	27558	14192	51.50%	14 (1)	7.14%	50.00%	5 (0)	7 (1)	2 (0)
İstanbul-Avcılar	Female	CHP	44.03 %	407240	202336	49.68%	37 (8)	21.62%	56.76%	16 (5)	21 (3)	0
İstanbul-Ataşehir[3]	Male	CHP	49.70 %	405974	204442	50.36%	38 (4)	10.53%	60.53%	15 (2)	23 (2)	0
İzmir-Konak	Female	CHP	46.91 %	385843	197475	51.18%	37 (9)	24.32%	72.97%	10 (2)	27 (7)	0
İzmir-Çiğli[4]	Male	CHP	52.38 %	173667	86572	49.85%	32 (6)	18.75%	68.75%	9 (2)	22 (4)	1 (0)
İzmir-Kiraz	Female	MHP/ AKP*	42.48 %	44017	21855	49.65%	15 (0)	0.00%	26.67%	4 (0)	3 (0)	8 (0)
İzmir-Aliağa[5]	Male	MHP	31.90 %	80948	37138	45.88%	25 (5)	20.00%	36.00%	12 (1)	4 (2)	9 (2)

Note 1. The numbers in parentheses represented the frequency of women council members. [1]Matched municipality for Kalecik, [2] Matched municipality for Bozkurt, [3] Matched municipality for Avcılar, [4] Matched Municipality for Konak, [5] Matched Municipality for Kiraz * Kiraz Municipality Mayor won the elections while affiliated with MHP but she transferred to AKP during second visit

3.1.1. Respondent sampling procedure

Once target municipalities accepted my invitation for study participation, I visited municipalities prior to data collection. I explained the data collection procedure during meetings with the office of private secretary (or directly with mayor), and took their verbal permission for recruiting volunteer civil servants. During data collection, I visited each municipality at least four times.

My first visits to municipalities for data collection were around six months after the election (November-December 2014). I approached each civil servant (n = 350 approximately) during work hours. I individually informed them about the study and asked for their voluntary participation[2]. In total 277 civil servants (51.8 % females) volunteered. In order to limit prior contact with female mayors, I excluded 16 respondents who either were the relative of the mayor, or worked with a woman municipality mayor in other municipalities. To avoid self-selection bias (Shadish et al., 2002), I excluded an additional eight respondents who were hired (or transferred from another municipality) after the elections. Hence, the final sample at the first visit consisted of 253 civil servants (52.2 % female).

My second visits were three months later (February-March 2015). Out of 253 civil servants who attended at the first visit, only 198 of them (51.6 % female) were available (attrition rate = 21.74 %)[3]. Informal conversations with human resource employees revealed that dropouts could be higher at my third visit (around May-June) because of prospected high workload in parallel to June 2015 National Elections. In order to overcome this potentially increasing attrition rates, I added 54 new respondents (44.4 % female) in total during second visits.

My third municipality visits were around May-June 2015. Out of 253 civil servants who attended at the first visit 176 employees (attrition rate = 30.43 %)

[2] Pilot testing revealed that it would be more efficient for me to visit each municipality unit and approach each employee for volunteer participation (rather than any employee introduction such as e-mails from department heads or the office of private secretary).

[3] The main reason of attrition at Phase 2 was the unavailability of respondents due to seasonal workload around February-March of specific departments across municipalities, such as Licensing and Inspection Department (Ruhsat & Denetim Müdürlüğü), Real Estate Department (Emlak İstimlak Müdürlüğü) Department of Environmental Protection and Control (Çevre Koruma & Kontrol Müdürlüğü) and Property Department (Emlak & İstimlak Müdürlüğü).

participated. Out of 54 new respondents 38 employees (attrition rate = 29.63 %) were available.

The fourth and last visits to municipalities were in September 2015 for only new respondents. Thirty-six civil servants were available out of 54 (attrition rate = 33.33 %).

Comparison of original sample vs. new participants. I compare original sample and new participants in terms of demographics and municipality characteristics to test whether the composition of original groups significantly shifted with newcomer participants at the second visits. As Table 3.2 presents, the original sample and new participants did not significantly differ in terms of exposure [χ^2 (1) = 1.94, *n.s.*], gender [χ^2 (1) = .18, *n.s.*], age [χ^2 (2) = .50, *n.s.*], education [χ^2 (2) = 2.38, *n.s.*], municipality tenure [χ^2 (2) = 3.10, *n.s.*], sectoral tenure [χ^2 (2) = 3.00, *n.s.*], and prior exposure to women leader [χ^2 (1) = .01, *n.s.*]. Results indicated no significant shift in sample compositions after the addition of new participants at the second visit. Given these sample similarities, I merged the responses of the original sample and newcomers. I also dummy coded for their participating condition as original participant (1) versus newcomer (0), and checked its effect in trajectory analyses.

Table 3.2.
Comparison of Original Sample versus New Participants at Phase 1

		Original sample (n = 253)		New participants (n =54)	
Characteristics		Frequency	%	Frequency	%
Exposure to a female leader	Exposure (n = 147)	119	47.0 %	28	51.9 %
	Control (n = 160)	134	53.0 %	26	48.1 %
Gender	Female (n = 144)	124	52.1%	20	44.4%
	Male (n = 139)	114	47.9%	25	55.6%
Age (years)[c]					
	30 > (n = 75)	62	28.5%	13	29.5%
	30-35 (n = 74)	60	27.5%	14	31.8%
	36 and < (n = 113)	96	44.0%	17	38.7%
Education					
	High school and > (n = 84)	64	30.0%	18	41.9%
	Vocational college (n = 58)	49	23.0%	9	20.9%
	Bachelor/master (n = 116)	100	46.9%	16	37.2%
Municipality tenure					
	1.5-5 years (n =97)	76	37.4%	21	51.2%
	5 – 15 years (n=91)	80	39.4%	11	26.8%
	15 years < (n =56)	47	23.2%	9	22.0%
Sectoral tenure					
	1.5-5 years (n=86)	67	32.5%	19	46.4%
	5 – 15 years (n=86)	75	36.4%	11	26.8%
	15 years < (n=75)	64	31.1%	11	26.8%
Prior exposure to women managers	No (n =236)	193	76.9%	43	79.6%
	Yes (n = 69)	58	23.1%	11	20.4%

Table 3.3 demonstrates the frequencies and attrition rates for each municipality across phases. Brief summary of frequencies across phases are as follows:

Phase 1 sample: consists of 307 civil servants, 253 for original sample recruited at first visit (n = 119 exposure group & n = 134 control group) and 54 for new participants recruited at second visit for the first time (n = 28 exposure group & n = 26 control group).

Phase 2 sample**:** consists of 236 respondents, 198 for original sample (n = 90 exposure group & n = 108 control group) and 38 for new participants (n = 20 exposure group & n = 18 control group). Attrition rates are 21.74% for original sample (24.37% exposure group & 19.40% control group) and 29.63% for new participants (28.57% exposure group & 30.77% control group).

Phase 3 sample**:** consists of 212 respondents, 176 for original sample (n = 72 exposure group & n = 104 control group) & 36 for new participants (n = 20 exposure group & n = 16 control group). Attrition rates are 30.43% for original sample (39.50% exposure group & 22.39% control group) and 33.33% for new participants (28.57% exposure group & 38.46% control group).

3.1.2. Respondent characteristics & sample matching analyses

Table 3.4.a illustrates the socio-demographics and municipality characteristics. I compared the respondent and sample characteristics of exposure group and control group for matching. I extensively presented the potential gender difference on attitudes toward female leadership in general. I therefore tried to control for any potential influence of participant gender by matching two samples in terms of gender. I also tried to match for age and education. Participant age and education can indicate cognitive fluency, which can interfere with performance in latency measures (Siegel, Dougherty & Huber, 2012). Particularly IATs involve task switching abilities and learning of the task that require fluency in cognitive processing and known to be related with age and experience through education (Siegel et al., 2012). Moreover, although I sampled employees who have not worked with a female mayor in municipalities, employees may still be exposed to female managers in their work life and therefore may have more positive or negative approach to female leadership. The lack of group differences on

prior exposure to female leadership at work and tenure indicators can account for such an effect. Chi square analyses do not show any significant group differences in terms of participant gender, age, education, prior exposure to women's leadership at work, or municipal tenure, except sectoral tenure, χ^2 (2) = 6.27, $p < .05$. Control group has higher levels of tenured employees compared to exposure group. Analyses also reveal no significant group differences in terms of the gender composition of district population and municipality council. As argued before, the lack of group differences on organizational demographics is critical in matching two samples in terms of potential perceived gender differences (Cohen & Broschak, 2013; Ely, 1995). I also checked the representativeness of mayor's party in the council (i.e., had higher than 50% seats in the council) to account for mayor's power/influence over municipality decisions. There was no significant group difference on the party representativeness in the council at the end of the second data collection. Yet, the mayor of Kiraz municipality transferred to another political party, resulting in higher representativeness of male mayors' affiliated political parties in the council, χ^2 (2) = 6.27, $p < .05$, at the beginning of third data collection. Taken together, these results support overall matching in terms of socio-demographic and municipality characteristics, except for the sectoral tenure. I control for sectoral tenure in statistical analysis prior to hypothesis testing.

3.1.3. Participant attrition analyses

I explore any systematic pattern in participant attritions across data collection phases (Graham, 2009; Hair, Black, Babin & Anderson, 2010; Schafer & Graham, 2002). Attrition or drop out occurs when not all participants attend to any subsequent phase of data collection. It is a common but usually unavoidable threat to the validity of longitudinal studies (Ployhart & Vandenberg, 2010; Shadish, Cook & Campbell, 2002). As shown at Table 3.3, attrition rates range from 21.74 % to 39.50 % across the exposure group and the control group in the present study. This range of attrition rates is in parallel to rates found in longitudinal studies in general (see, Ployhart & Vandenberg, 2010). I assessed shift in sample composition and any systematic/-non-random missingness because of dropouts. Dropouts might have shifted socio-demographic and municipality characteristics of exposure group versus control group, which might have

accounted for observed changes/stability in implicit prejudice and implicit stereotypes toward female leadership.

Besides, non-random missingness may have occurred for participants who have specific socio-demographic characteristics and/or specific range of baseline implicit stereotyping and prejudice toward female leadership. Non-random missingness means that the missingness of X may depend on variable Y. This is also called as missing not at random (Schafer & Graham, 2002). For example, those who may have had higher implicit prejudice toward female leadership would have been reluctant to attend subsequent phases of data collection. If missingness is systematic - missing at random or completely at random - then the missingness of variable X is independent of other variables for a given subject and between participants.

In order to assess any systematic missingness of participants and any shifts in sample compositions across phases – i.e., attrition/drop-out rates, I followed the following recommendations in past literature (e.g., Asendorpf, van de Schoot, Denissen & Hutterman, 2014; Bentein, Vandenberghe, Vandenberg & Stinglhamber, 2005; Byrne, 2010; Cheung, 2007; Hair et al., 2010; Ployhart & Vandenberg, 2010):

First, I classified participants into four groups: 1) Group 1 consisted of those who only attended Phase 1 (n = 71, 23.1%), 2) Group 2 attended Phase 1 and Phase 2 (n = 24, 7.8%), 3) Group 3 attended Phase 1 and Phase 3 but not at Phase 2 (n = 4, 1.3%), and 4) Group 4 consisted of those who attended all three phases (n = 208, 67.8%).

Table 3.3.

The Frequency of Participants & Attrition Rates among Municipalities across Phases

Municipality	PHASE 1				PHASE 2					PHASE 3				
	Volunteers	$N_{original}$	$N_{New\ participants}$	Final N	$N_{original}$	Attrition % original sample	$N_{New\ participants}$	Attrition % for new participants	Final N	$N_{original}$	Attrition % original sample	$N_{New\ participants}$	Attrition % for new participants	Final N
Avcılar	41	40	19	59	31	22.50%	15	21.05%	46	28	30.00%	15	21.05%	43
Bozkurt	15	14	0	14	12	14.29%	0	-	12	6	57.14%	0	-	6
Kalecik	12	11	9	20	8	27.27%	5	44.44%	13	7	36.36%	5	44.44%	12
Kiraz	16	14	0	14	11	21.43%	0	-	11	10	28.57%	0	-	10
Konak	46	40	0	40	28	30.00%	0	-	28	21	47.50%	0	-	21
Exposure group	**130**	**119**	**28**	**147**	**90**	**24.37%**	**20**	**28.57%**	**110**	**72**	**39.50%**	**20**	**28.57%**	**92**
Aliağa[5]	27	24	8	32	19	20.83%	6	25.00%	25	19	20.83%	6	25.00%	25
Altındag[1]	32	25	3	28	20	20.00%	3	0.00%	23	21	16.00%	3	0.00%	24
Ataşehir[3]	21	20	8	28	18	10.00%	6	25.00%	24	17	15.00%	5	37.50%	22
Buldan[2]	19	18	1	19	13	27.78%	0	100.00%	13	11	38.89%	0	100.00%	11
Çiğli[4]	32	31	6	37	25	19.35%	3	50.00%	28	25	19.35%	2	66.67%	27
Ayaş[1]	16	16	0	16	13	18.75%	0	-	13	11	31.25%	0	-	11
Control group	**147**	**134**	**26**	**160**	**108**	**19.40%**	**18**	**30.77%**	**126**	**104**	**22.39%**	**16**	**38.46%**	**120**
Overall sample	**277**	**253**	**54**	**307**	**198**	**21.74%**	**38**	**29.63%**	**236**	**176**	**30.43%**	**36**	**33.33%**	**212**

Note 1. [1] Matched municipality for Kalecik, [2] Matched municipality for Bozkurt, [3] Matched municipality for Avcılar, [4] Matched Municipality for Konak, [5] Matched Municipality for Kiraz

Note 2. At my first visit to municipalities (November-December 2014), I collected data from 254 respondents (original sample) in their Phase 1. At second visit (Feb-March 2015) 198 of them attended (Phase 2 of original sample) and 54 new participants added (Phase 1 of new participants). At third visit (May-June 2015), 176 of original sample (Phase 3 for original sample) and 38 of new ones (Phase 2 of newcomers) participated. At fourth visit (Sept. 2015), 36 of newcomers were available in their Phase 3.

Note 3. Initial N: The frequency of all civil servants who volunteered for participation at first municipality visit.

$N_{original}$: The frequency of participants who were eligible for the selection criteria (e.g., those who were not relatives of mayor, not worked with female mayor before, or did not start to work after elections) at first visit.

$N_{New\ participants:}$ The frequency of participants who were added to the original sample at second visit (three months after the first data collection).

Final N: The total number of participants attended at each phase.

Attrition %: The dropout rates of participants. Baselines were Phase 1 frequencies.

Table 3.4.a.
Sample Characteristics & Group Level Comparisons for Matching

		Exposure Group N = 147		Control Group N = 160	
Participant characteristics		Frequency	%	Frequency	%
Gender[a]	Female (n = 147)	57	46.3%	90	56.2%
	Male (n = 136)	66	53.7%	70	43.8%
Age (years)[b]					
	30 > (n = 75)	32	29.9%	43	27.7%
	30-35 (n = 74)	33	30.8%	41	26.5%
	36 and < (n = 113)	42	39.3%	71	45.8%
Education[c]					
	High school and > (n = 85)	31	25.8%	54	33.8%
	Vocational college (n = 71)	27	22.5%	44	27.4%
	Bachelor/master (n = 124)	62	51.7%	62	38.8%
Municipality tenure[d]					
	1.5-5 years (n = 103)	50	47.6%	53	33.1%
	5 – 15 years (n = 100)	33	31.4%	67	41.9%
	15 years < (n = 62)	22	21.0%	40	25.0%
Sectoral tenure[e]					
	1.5-5 years (n=87)	44	40.7%	43	26.9%
	5 – 15 years (n=96)	36	33.4%	60	37.5%
	15 years < (n =85)	28	25.9%	57	35.6%
Prior exposure to women leader[f]	No (n= 189)	79	74.5%	110	68.6%
	Yes (n =77)	27	25.5%	50	31.4%
Municipality characteristics					
Ratio of female citizens in district[g]	< 50 % (n = 195)	94	62.4%	101	63.1%
	>50% (n = 112)	53	37.6%	59	36.9%
Ratio of female council members %[h]	<15% (n = 107)	54	34.0%	53	33.1%
	>15% (n = 200)	93	66.0%	107	66.9%
Ratio of council members of of mayor's affiliated party[i]	<50% (n = 161)	82	58.2%	69	43.1%
	>50% (n = 156)	65	41.8%	91	56.9%

Note. Matching tests suggesting no group difference except for sectoral tenure and the representativeness of mayor's party affiliation: [a]X^2 (1) = 2.22, n.s.; [b] X^2 (2) = 1.17, n.s.; [c]X^2 (2) = 4.98, n.s; [d]X^2 (2) = 5.71, n.s.; [e]X^2 (2) = 6.27, $p < .05$.; [f] X^2 (1) = .22, *n.s;* [g]X^2 (3) = 1.59 n.s., [h]X^2 (1) = .24, n.s., [i]X^2 (1) = 6.27, $p < .05$.

Second, I compared their socio-demographic characteristics via chi-square tests (I discarded Group 3 from comparisons because they were few in number, 1.3 %). As shown at Table 3.4.b, groups were not statistically different in terms of exposure to a female leader, χ^2 (2) = .18, *n.s*; gender, χ^2 (2) = .18, *n.s*; age, χ^2 (4) = 2.56, *n.s*; education, χ^2 (4) = 7.23, *n.s*; municipality tenure, χ^2 (4) = .95, *n.s*; sectoral tenure, χ^2 (4) = 5.62, *n.s*; prior exposure to a female leader [g]χ^2 (2) = 1.49, *n.s*. Third, I assessed any systematic difference in their IAT D scores at Phase 1. One-way ANOVA showed

that Phase 1 measure of GL-IAT, F (2, 281) = 1.68, *n.s.*, and P-IAT, F (2, 299) = .10, *n.s.*, did not differ across groups, supporting missingness at random and no shift in sample composition. Hence, analyses did not produce any detectable systematic dropouts or any potential data biases because of attritions. In most longitudinal studies, one main source of missingness (attrition rates) was methods to assure anonymity (Cheung, 2007; Ployhart & Vandenberg, 2010). In the present study, employees determined their own identification number as their unique codes of participation.

I used identification numbers to match repeated observations across phases[4]. This method was highly recommended to address ethical issues and to support data quality (Cheung, 2007; Shadish et al., 2002). Indeed, the anonymity system motivated employees to participate. However, as suggested by Cheung (2007) limited information on the identity of participants often deters matching repeated measures. This study partly faces with the problem of mismatch among identity numbers in particularly Phase 2, explaining some part of attrition. Moreover, participants are reluctant to report, for example, basic demographics[5]. Cheung (2007), indeed, argued that such missingness might be inevitable despite the anonymity system. Hence, although self-determined identification number system decreased participants' initial distress and motivated them to participate in repeated measurements, it created missingness at repeated measurements.

[4] I, nevertheless, informally recorded less personal information (e.g., their location in the municipality, their physical characteristics) and matched with their identity number following each session.

[5] In the present study, some employees did not report demographics (e.g., gender, tenure) even if they were civil servants (and hence have high job security protected strictly by civil servant laws). When asked, they said that one could easily identify them in the municipality by considering demographics. This happened despite repeated assurance of anonymity and confidentiality. Personal communications with Turkish scholars confirmed the presence of such an attitude in other studies and in other types of governmental or private sector organizations. Some refused to provide their evaluations about mayor in self-report scales.

Table 3.4.b.

Comparison of Attrition Groups on Socio-Demographics & Phase 1 GL-IAT & P-IAT D Scores.

	Group 1 (n = 71)		Group 2 (n =24)		Group 3 (n = 4)		Group 4 (n = 208)	
Characteristics	n	%	n	%	n	%	n	%
Exposure to a female leader[a]								
Exposure (n = 137)	35	49.3 %	12	50.0 %	4	100.0%	86	41.3%
Control (n = 170)	36	50.7 %	12	50.0 %	0	0.0%	122	58.7%
Gender[b] Female (n = 149)	28	56.0%	12	57.1%	2	50.0 %	107	51.4%
Male (n = 134)	22	44.0%	9	42.9%	2	50.0 %	101	48.6%
Age (years)[c]								
30 > (n = 75)	14	36.8%	5	29.5%	1	25.0%	55	27.1%
30-35 (n = 74)	9	23.7%	5	31.8%	2	50.0%	58	28.6%
36 and < (n = 113)	15	39.5%	7	38.7%	1	25.0%	90	44.3%
Education[d]								
High school & > (n = 82)	16	42.1%	8	47.1%	0	0.0%	58	29.4%
Vocational college (n = 58)	8	21.1%	2	11.8%	2	50.0%	46	23.4%
Bachelor/master (n = 116)	14	36.8%	7	41.1%	2	50.0%	93	47.2%
Municipality tenure[e]								
5 years > (n = 97)	15	41.7%	6	37.5%	2	50.0%	74	39.4%
5 – 15 years(n = 91)	14	38.9%	7	43.8%	1	25.0%	69	36.7%
15 years < (n = 56)	7	19.4%	3	18.8%	1	25.0%	45	23.9%
Sectoral tenure[f]								
5 years > (n = 86)	15	41.7%	3	18.7%	2	50.0%	66	34.5%
5 – 15 years (n = 86)	13	36.1%	9	56.3%	1	25.0%	63	33.0%
15 years < (n = 75)	8	22.2%	4	25.0%	1	25.0%	62	32.5%
Prior exposure to female leader[g]								
Yes (n = 58)	10	16.7%	4	18.2%	1	25.0%	43	20.7%
No (n = 236)	50	83.3%	18	81.8%	3	75.0%	165	79.3%
	M	SD	M	SD			M	SD
GL-IAT Ph 1[h] (n =291)	.12	.34	-.06	.38	-	-	.07	.30
P-IAT Ph1[i] (n = 305)	-.16	.51	-.18	.58	-	-	-.17	.31

Note. GL-IAT: Gender Leadership Implicit Association Test; P-IAT: Prejudice Implicit Association Test.

Longitudinal studies commonly deal with attrition by discarding incomplete cases from the study as in listwise deletion method. For studies with relatively small sample sizes, inflated standard errors after case deletion might create estimation inefficiencies in longitudinal data analyses (Cheung, 2007; Graham, 2009). Besides, subject discarding in listwise deletion can be misleading especially if there are systematic differences between respondents and non-respondents. However, in the present study, the number of respondents who attended all three phases (n = 208) is acceptable for a longitudinal study in general and for growth curve models in particular (Cheung, 2007; Graham, 2009). The current attrition findings disconfirm any such

systematic difference between respondents versus non-respondents. Therefore, I prefer listwise deletion and incorporate only the data of Group 1 who attended the three phases of data collection (exposure group n = 86; control group n = 122) into trajectory analyses.

3.2.Variables and Measures

Data collection materials involve implicit association tests – i.e., Gender-Leadership IAT (GL-IAT) and Prejudice IAT (P-IAT) – and self-report survey measures. Table 3.5 presents variables and their measures across data collection phases.

3.2.1. Measures of implicit attitudes toward female leadership: Implicit Association Tests (IATs)

I assessed implicit attitudes via Implicit Association Tests (IATs). It allows relatively easy administration and, with its recent refinements, a more elaborative algorithm for the evaluation of implicit attitudes (Greenwald, Nosek & Banaji, 2003; Nosek et al., 2007a). It is accepted as the most popular and relatively reliable latency measure among measures of implicit attitudes (Greenwald, Poehlman, Uhlman & Banaji, 2009; Lane et al., 2007; Nosek, Smyth, Hansen, Devos, Lindner, Ranganath et al., 2007b; Payne & Gawronski, 2010). IAT provides an opportunity to capture sub-conscious and automatic associations in attitudes toward female leadership at work setting. IAT requires respondents to categorize each stimulus into one of the paired labels as fast and as correct as they can. The logic is that if the test taker is slower and is making more errors in the categorization for two paired labels (e.g., female-leadership and male-followership) compared to alternative labels (e.g., male-leadership and female-followership), then the associations between two paired labels (female and leadership) are weaker in the mind.

I measured implicit stereotypical and implicit prejudicial attitudes toward female leadership via *Gender-Leadership IAT* (GL-IAT) and *Prejudice IAT* (P-IAT), respectively. All IATs were developed and run via the Inquisit 4.0.3 computer software (2013). Both GL-IAT and P-IAT have the *standard procedure* (Nosek et al., 2007a).

Test-takers were seated in front of the computer screen. The program, first, presented standard IAT instructions. Two pairs of labels appear on upper right and upper left of a black screen (see, schematic illustrations of tests on Figure 3.2 and Figure 3.3). Stimuli (e.g., words or images) randomly appear at the center of the screen. Test takers should categorize stimuli as quickly and correctly as possible either by pressing left or right key. If the response is correct, another stimulus appears. If the response is false, then a red X sign emerges until a response was registered. Each IAT takes 10 minutes on average to administer.

Table 3.5.
Variables and Measures across Phases

Variables	Phase 1	Phase 2	Phase 3
Implicit attitudes toward female leadership			
Implicit stereotyping	GL-IAT	GL-IAT	GL-IAT
Implicit prejudice	P-IAT	P-IAT	P-IAT
Content of leadership prototype	ILTs scale	-	ILTs scale
Perceived leader characteristics			
Leader success	Perceived municipality performance scale	Perceived municipality performance scale	-
Agency-communal characteristic	Perceived Agency-Communality of Mayor Scale	Perceived Agency-Communality of Mayor Scale	-
Subjective experience with the leader	Quantity of interaction scale LMX-MDM Interactional justice scale	Quantity of interaction scale LMX-MDM Interactional justice scale	-
Follower characteristic			
Gender identity	BSRI	-	-

Note. BSRI: Bem Sex Role Inventory, GL-IAT: Gender-Leadership Implicit Association Test, ILTs scale: Implicit Leadership Theories Scale, LMX-MDM: Leader Member Exchange Multi-dimensional scale, P-IAT: Prejudice Implicit Association Test.

The categorization procedure follows 7-block structure and 120 trials in total. The program provides instructions at the beginning of each block. The program, Inquisit, automatically recorded the latencies and the correctness of all responses. Latencies and errors in sorting categories and attributes are proxies for the strength of association

among the cognitive representations of female and leadership in mind (Greenwald et al., 2003; Nosek et al., 2007a).

The following sections separately describe these IAT characteristics for *Gender-Leadership IAT* (GL-IAT) and *Prejudice IAT* (P-IAT). I present detailed information on stimuli generation, the structure of blocks and the number of trials for each test below, and then subsequently introduce scoring, reliability and validity issues.

3.2.2. Implicit stereotypic attitudes toward female leadership: Gender-Leadership IAT (GL-IAT)

I assessed cognitive associations between female and leadership concepts via GL-IAT. Bayazıt, Czukor, Dural and Özalp-Türetgen (2014) developed GL-IAT and tested it on an undergraduate student sample. I contextualized the test to the municipality setting by using municipality mayor and municipality employee labels (instead of team leader and team follower labels used in the original version). Such modification is used to adopt the test to the immediate context (De Houwer & Moors, 2010; Olson & Fazio, 2006) - i.e., municipality. All other stimuli and the procedure are similar to Bayazıt and colleagues' (2014) version. Table 3.6 demonstrates categories/labels and test stimuli.

Table 3.6.
Stimuli of GL- IAT

Female names (Kadın)	Male names (Erkek)	Municipality mayor (Belediye başkanı)	Municipality personnel (Belediye çalışanı)
Ayşe	Ahmet	Coordinator (Koordine eden)	Team player (Takım oyuncusu)
Elif	Arda	Encouraging (Yüreklendiren)	Compliant (Söz dinleyen)
Esra	Emre	Far-sighted (İleri görüşlü)	Cooperative (Işbirliğine yatkın)
Fatma	Hasan	Guiding (Yol gösteren)	Loyal (Sadakatli)
Merve	Murat	Inspiring (İlham veren)	Obedient (İtaatkar)
Özlem	Ömer	Visionary (Vizyoner)	Agreeable (Uyumlu)

***GL-IAT stimuli generation and content validity*.** The selection of representative items for each category is recommended to support the validity of IATs (Mitchell, Nosek & Banaji, 2003; Nosek, Greenwald & Banaji, 2005). In other words, stimuli (e.g., the item "coordinator") should clearly represent the associated label (e.g., the label municipality mayor). To assure the representativeness of items, Bayazıt and colleagues

(2014) generated a list of items that represent the most typical follower and leader, basing on results of their large qualitative study conducted in a Turkish employee sample. They also considered past findings on the leadership conceptions of employees in Turkey (e.g., Aycan, 2006; House et al., 2004; Kabasakal et al., 2011; Kabasakal & Bodur, 2007; Özalp-Türetgen & Cesur, 2010; Sümer, 2006; Tabak, Kızıloğlu & Türköz, 2013). Then, they asked a sample of 20 students to rate the degree of typicality of items in terms of leadership versus followership. They selected the most representative six items for leadership and six items for follower categories as seen on Table 3.7. Similarly, they selected six names for females and six names for males from the list of the most frequently used names in Turkey (Civil registration statistics, 2013).

The salience asymmetry (Rothermund & Wentura, 2004) might be threat to the content and construct validity of IATs in general. Salience asymmetry refers to the possibility that some categories in IATs might be perceptually more salient and therefore grouped together quicker than other category-attribute pairs. For example, if a category or an attribute is more familiar to respondents compared to other stimuli, they will be easily associated and grouped regardless of stimuli content. The lack of familiarity with any stimulus might potentially be a source of test artifact (e.g., Dasgupta, Greenwald & Banaji, 2003, but also see Nosek et al., 2007a), because the categorization of unfamiliar stimuli may not reflect the strength of association but simply the lag due to the effort needed to understand the item. In GL-IAT, Bayazıt and colleagues (2014) tried to select particularly common leadership - followership items that are frequently used in daily language as well as the most commonly used names.

The salience asymmetry can also derive from the valence of stimuli (Rothermund & Wentura, 2004). For example, relatively high positive valence for a category-attribute pair might be associated more easily than other pairs. In order to avoid such valence effects, Bayazıt and colleagues (2014) asked students to rate the valence of each leadership and followership item in the pilot testing of GL-IAT. The researchers considered the emotional neutrality of leadership-followership items during item selection for GL-IAT. Attributes for gender categories – i.e., names – did not yield any systematic emotionality. We avoided names that can potentially convey traditionally negative or positive stereotypic cue, or exemplar leaders' names.

GL-IAT blocks and trials. Table 3.7 presents blocks and the number of GL-IAT trials. GL-IAT is composed of seven blocks - each containing either 20 trials or 40 trials of categorization.

Table 3.7.
Blocks and trials in GL-IAT

Block	# of trails	Labels on Top Left	Labels on Top Right
1 (practice)	20	Male (Erkek)	Female (Kadın)
2 (practice)	20	Municipality mayor (Belediye başkanı)	Municipality employee (Belediye çalışanı)
3 (compatible)	20	Male or Municipality Mayor (Erkek veya Belediye başkanı)	Female or Municipality employee (Kadın veya Belediye çalışanı)
4 (compatible)	20	Male or Municipality Mayor (Erkek veya Belediye başkanı)	Female or Municipality employee (Kadın veya Belediye çalışanı)
5 (practice)	40	Female (Kadın)	Male (Erkek)
6 (incompatible)	40	Female or Municipality Mayor (Kadın veya Belediye başkanı)	Male or Municipality employee (Erkek veya Belediye çalışanı)
7 (incompatible)	40	Female or Municipality Mayor (Kadın veya Belediye başkanı)	Male or Municipality employee (Erkek veya Belediye çalışanı)

The program first presents the standard instructions of IAT. It then trains test takers in practice blocks. Participants categorize female/male names or leadership/followership characteristics by pressing the left key (W) or the right key (P). Participants first distinguish male and female names (Block 1). For example, a female name ("Esra") appears on the middle of the screen. Respondent should press right key given that "female" gender label located on the right top of the screen at Block 1 (see Table 3.7). Names randomly appear within 20 trials. Respondents, then, categorize municipality mayor (leadership) and municipality employee (followership) characteristics (Block 2) within 20 trials on same designed keys.

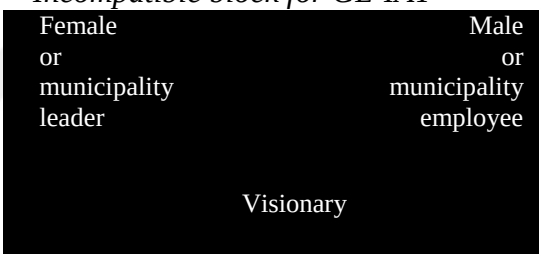
Following the practice blocks, Block 3 and Block 4 present contrasting two paired labels (i.e., male or municipality mayor on left, female or municipality employee on right) on top of the screen (see, Table 3.7). This time either characteristics or names randomly appear on the middle of the screen. If a male name or leader characteristic appears, test taker should press left key. If a female name or follower characteristic appears, s/he should press right button. Block 3 and Block 4 are *compatible block*s given that paired labels are theoretically assigned as compatible (i.e., male-municipality

mayor versus female-municipality personnel) (see, Figure 3.2.b). Each block has 20 trials.

Block 3 and Block 4 are followed by a practice block in which male and female labels are switched (Block 5). As seen on Table 3.7, test takers press left key for female names and right key for male names. Then test takers distinguish names or characteristics for female-municipality mayor and male-municipality employee pairs on Block 6 and Block 7. These blocks are *incompatible blocks*, because labels are theoretically incompatible with each other (i.e., female-municipality mayor versus male-municipality employee) (see, Figure 3.2.b). The scoring involves the comparison of latencies and errors in compatible blocks versus incompatible blocks as an indicator of cognitive associations between male-leadership versus female-leadership representations in mind.

Figure 3.2.a.
A schematic illustration of Compatible block for GL-AT

Figure 3.2.b.
A schematic illustration of Incompatible block for GL-IAT



As seen on Table 3.7, GL-IAT doubles the number of trials for Block 5, Block 6 and Block 7 – i.e., 40 trials instead of 20 trials. This is important to avoid order effect: respondents can over-learn the task on initial block. Such over-learning can increase the strength of association in the first two combined tasks compared to the second sets of combined tasks (Greenwald et al., 1998). Doubling of trials extend the practice with switched categories and can effectively avoid over-learning (Nosek et al., 2005).

I counterbalanced the order in which the participants performed compatible blocks and incompatible blocks across participants as recommended by Greenwald and Nosek (2001). The program automatically records the order of presentation of compatible versus incompatible blocks. I, then, check the order effect in GL-IAT. One-way ANOVA indicated no significant difference between the order of blocks on GL-IAT Phase 1 score, F (1, 306) =.476, *n.s.*, GL-IAT Phase 2 score, F (1, 233) = .153, *n.s.*, and,

GL-IAT Phase 3 score, F (1, 206) = .783, *n.s.* Given that GL-IAT scores are not different in terms of the order of presentation of compatible blocks versus the incompatible blocks, I proceed to analyses with merged GL-IAT scores of all block orders.

3.2.3. Implicit prejudice toward female leadership: Prejudice IAT (P-IAT)

I assessed implicit prejudicial attitudes toward female leadership via P-IAT. I adopted Race Prejudice IAT of Rudman and colleagues (2001) to gender and leadership context. P-IAT presents female leader versus male leader image for leader categories and pleasant versus unpleasant words as positive/negative attributes. Table 3.8 presents test stimuli of P-IAT.

Table 3.8.
Stimuli for P-IAT

Female leader (Kadın lider)	Male leader (Erkek lider)	Pleasant (Olumlu)	Unpleasant (Olumsuz)
		Goodness (İyilik)	Hate (Nefret)
		Awesome (Harika)	Terrible (Berbat)
		Fun (Eğlence)	Doom (Kasvet)
		Health (Sağlık)	Harm (Zarar)
		Likeable (Sevilen)	Repellent (İtici)

P-IAT stimuli generation and content validity: I tried to select the most representative stimuli for labels/categories (Mitchell et al., 2003) and the familiar items for respondents (Dasgupta et al., 2003; Rothermund & Wentura, 2004). I used pleasant and unpleasant words used in previous studies that measured implicit prejudice via IAT (i.e., Greenwald et al., 1998; Rudman et al., 2001). In an initial pilot testing (n = 14, 5% female), employees rated a list of positive and negative words in terms of pleasantness

on a 7 point Likert scale (1: Very unpleasant, "Oldukça olumsuz", 7: Very pleasant, "Oldukça olumlu"). Words such as friend (arkadaş), calm (dingin), honest (dürüst), fun (eğlence), awesome (harika), piece (huzur), goodness (iyilik), pleasure (keyif), miracle (mucize), happiness (mutluluk), pleasant (olumlu), health (sağlık), likeable (sevilen), holiday (tatil) and compliant (uyumlu) were rated as the most pleasant words. Words such as trouble (bela), terrible (berbat), bomb (bomba), murder (cinayet), worry (endişe), unrestful (huzursuz), gloom (hüzün), repellent (itici), accident (kaza), doom (kasvet), hate (nefret), attack (saldırı), distress (sıkıntı) and harm (zarar) were rated as the most unpleasant words.

The salience asymmetry among these words could be a source of bias particularly for P-IAT since the negativity of unpleasant words could be more salient compared to the positivity of pleasant words. Researchers suggested that such salience effect might not be so strong if the salience of competing categories and attributes is not at extreme levels (see, Nosek et al., 2007b; Rothermund & Wenture, 2004). Therefore, I carefully sorted out pleasant and unpleasant words by matching their degree of pleasantness versus unpleasantness. The most pleasant and unpleasant words were identified. I, furthermore, preferred gender-neutral attributed based on sex role measures and studies in Turkey (Özkan & Lajunen, 2005), as shown at Table 3.8.

In the pilot test, I showed various images of 15 male and 15 female leader figures one by one to each respondent. Images depicted a silhouette or real life leader who seemed as if he or she is leading or located in front of a group of followers. I asked to describe what they saw in a given image and recorded their open-ended responses. Then, they rated the emotional valence of each image. As explained earlier, the representativeness (Nosek et al., 2007a), the familiarity of the images (Rothermund & Wentura, 2004) and selecting the emotionally neutral ones (Greenwald et al., 2009) are critical. Considering these issues, I selected five images which pilot respondents only described as the image of a male leader or a female leader with a team of his/her followers.

P-IAT blocks and trials. Table 3.9 illustrates blocks and the trials of P-IAT. Similar to GL-IAT, P-IAT consists of 7-block structure. Following the presentation of standard instructions, Block 1 trains participants to categorize images of male leader by

pressing left key (R) and those of female leader by pressing right key (I) (20 trials). Participants practiced pleasant and unpleasant categories at Block 2 (20 trials).

Block 3 (20 trials) and Block 4 (trials) are compatible blocks (see, Figure 3.3.a) which present paired labels: male leader-or-pleasant versus female leader-or-unpleasant. As noted before in order to avoid over-learning of categorizing, the test doubles the number of trails in Blocks 5, 6 and 7 (Greenwald et al., 1998).

Table 3.9.
Blocks and Trials of P-IAT

Block	# of trails	Labels on Top Left	Labels on Top Right
1 (practice)	20	Male leader (Erkek lider)	Female leader (Kadın lider)
2 (practice)	20	Pleasant word (Olumlu ifade)	Unpleasant word (Olumsuz ifade)
3 (compatible)	20	Male leader or pleasant (Erkek lider veya olumlu)	Female leader or unpleasant (Kadın lider veya olumsuz)
4 (compatible)	20	Male leader or pleasant (Erkek lider veya olumlu)	Female leader or unpleasant (Kadın lider veya olumsuz)
5 (practice)	40	Female leader (Kadın lider)	Male leader (Erkek lider)
6 (incompatible)	40	Female leader or pleasant (Kadın lider veya olumlu)	Male leader or unpleasant (Erkek lider veya olumsuz)
7 (incompatible)	40	Female leader or pleasant (Kadın lider veya olumlu)	Male leader or unpleasant (Erkek lider veya olumsuz)

Block 5 requests participants to press left key for female leader images and right key for male leader images. Block 6 and Block 7 are incompatible blocks (see, Figure 3.3.b), including the following paired labels: female leader-or-pleasant versus male leader-or-unpleasant words.

Figure 3.3.a.
A schematic illustration of Compatible block for P-AT

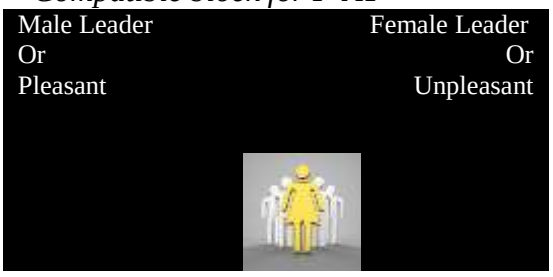
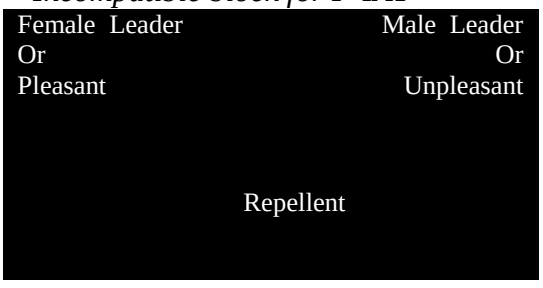


Figure 3.3.b.
A schematic illustration of Incompatible block for P-IAT



As in GL-IAT, I counterbalanced the order of compatible/incompatible blocks across participants (Greenwald & Nosek, 2001). I checked the order effect of P-IAT.

One-way ANOVA indicates no significant difference between the order of blocks on P-IAT Phase 1 score, F (1, 306) = .069, *n.s.;* P-IAT Phase 2 score, F (1, 235) = .113, *n.s.*, and P-IAT Phase 3 score, F (1, 208) = .360, *n.s.* Given that P-IAT scores are not different in terms of the order of presentation of compatible blocks versus the incompatible blocks, I proceeded to analyses with merged P-IAT scores of all block orders.

3.2.4. The reliability and validity of GL-IAT and P-IAT

Issues in reliability. IAT is accepted as the most reliable implicit measure, yet it has relatively low reliability coefficient rates compared to classical self-report scales (Lane et al., 2007; Nosek et al., 2007b). Points above .60 are commonly accepted as good indication of internal consistency for latency based measures, yet the correlations were found to be as low as .40. IATs' test-retest reliability might even be more problematic (e.g., Cunnigham et al., 2001). Previous studies showed that the test-re-test reliability of IAT measures ranged from .20 (e.g., Cunningham et al., 2001) to .69 (see, Egloff, Schwerdtfeger & Schmukle, 2005; Lane et al., 2007).

The task-irrelevant variability of response latencies and high sensitivity of IATs to immediate context are common reasons of lower levels of IAT reliability coefficients (Blair, 2002; Cunnigham et al., 2001). Task irrelevant variability is partly due to diversities in testing conditions (e.g., environmental distracters). To limit task-irrelevant variability (Lane et al., 2007) and partly the variability in immediate context, I tried to standardize the testing conditions across participants. The program provides standard instructions; tests were conducted in a relatively quiet test environment; and I verbally instructed respondents in one-by-one sessions (this was detailed in Procedure section). The context sensitivity of IAT can be also tied to the automatic activation of cognitive representations of immediate context (e.g., current organizational experience) when participants see IAT stimuli (Cunnigham et al., 2001; Lane et al., 2007). Municipality label based GL-IAT can deal with such context based sensitivity by narrowing the attention of participants to the current organization rather than their broader experiences with female leadership in general.

I calculated internal consistencies of GL-IAT and P-IAT by Cronbach alpha coefficient estimation on four parcels of each IAT (see, Karpinski & Steinman, 2006; Schmukle & Egloff, 2006; Sriram &Greenwald, 2009). I correlated D scores of Phase 1 and Phase 2 for only control group to examine test-retest reliabilities. In order to account for error variances due to task-irrelevant variability across time, I further longitudinally analyzed the measurement models on parcels of GL-IAT and P-IAT. The result section demonstrates reliability findings in detail.

Issues in the construct validity of IATs. I partially test the construct validity of IATs by examining the relationships between Phase 1 IAT scores and the scores obtained from the explicit evaluations of actual woman mayors (e.g., the perceived success of mayor) (see, Results section). Past research indicated that the scores of IATs and direct measures such as self-report surveys can have varying degrees of correlations for a given attitude subject (e.g., Nosek, 2005). In classic self-report scales, this might make the convergent validity of scale questionable. In implicit tests realm it might be the result of construct level differentiation of implicit versus explicit attitudes in mind (De Houwer & Moors, 2010; Nosek, 2005). For example, participants may have lower introspection due to automaticity and unconsciousness involved in implicit association tests compared to explicit ones (Nosek, 2005).

In addition to construct level differentiation, Nosek (2005) argued that intra-individual variables (e.g., self-presentation concerns in surveys) as well as attitude content (e.g., whether attitude has bipolar structure or one-sided dimension) can moderate the strength of relations among implicit and explicit evaluations. Considering all these arguments, I will be cautious about evaluating the correlations between IATs and self-report measures as disconfirming/confirming evidence of IAT's convergent validity.

In terms of predictive validity of IAT, contradicting meta-analytical findings exist (see, Greenwald et al., 2009; Greenwald, Banaji & Nosek, 2015; Oswald, Mitchell, Blanton, Jaccard & Tetlock, 2013; Oswald, Mitchell, Blanton, Jaccard & Tetlock, 2015). The accumulating evidence, however, suggested that albeit low effect size levels, IAT D scores are still accounting for subtle cognitive and behavioral outcomes in diverse contexts, such as cumulative discriminative tendencies in the society (see, Greenwald et al., 2015).

There also has been debate on whether association strengths measured by IATs reflect personally unique prejudicial/stereotypic attitudes versus cultural beliefs about the attitude object (e.g., Arkes & Tetlock, 2004; Olson & Fazio, 2004; Tetlock & Arkes, 2004). Accordingly, participants may tend to reflect their cultural knowledge about attitude object rather than their true attitudes during IAT tasks. Olson and Fazio (2004), similarly, argued that such knowledge on cultural norms about a given attitude might contaminate personal tendencies.

Greenwald and colleagues (Banaji, Nosek & Greenwald, 2004; Greenwald et al., 2009; Greenwald et al., 2015) responded to these criticisms by emphasizing that the association strength reflects "something in the person", which can involve the perception of culturally stereotypic beliefs and/or personal implicit attitudes. Indeed, the meta-analytic study on the predictive validity of IATs (Greenwald et al., 2009) illustrated that IAT is in general very sensitive to variances in individual differences within even similar socio-cultural groups. The current research similarly targeted *any* within person variations in implicit level attitudes about woman's leadership without differentiating change in participants' cultural beliefs about women's leadership or their unique individual attitudinal tendencies.

3.2.5. Content of leadership prototypes: Implicit Leadership Theories (ILTs) Scale

I measured the content of leadership prototypes using the dynamic versus sensitivity factors in ILTs scale originally developed by Offermann and colleagues (1994) and revised by Epitropaki and Martin (2004). I added items to this scale in order to capture culturally relevant leadership prototypes of employees in Turkey.

Item generation. The revised ILTs scale consists of 21 items. The sub-dimensions are sensitivity, intelligence, dedication, dynamism, tyranny and masculinity. I further added items considering past research on ILTs in Turkey (e.g., Fikret Paşa et al., 2001; House et al., 2004; Kabasakal et al., 2011; Kabasakal & Bodur, 2007) as well as our preliminary qualitative findings on leadership prototypes of Turkish white collar employees (Bayazıt, Özalp-Türetgen & Dural, under preparation).

Original items in sensitivity, dedication, dynamism and intelligence sub-scales directly correspond to the set of most frequent leadership attributes reported by Turkish employees in past studies (e.g., Bayazıt et al., under preparation; Kabasakal et al., 2011; Kabasakal & Bodur, 2007; Özalp-Türetgen & Cesur, 2010; Tabak et al., 2013). These are helpful (yardımcı), understanding (anlayışlı), sincere (samimi/içten) for sensitivity sub-scale of the revised scale (α = .88). I also added items of Offermann and colleagues – i.e., compassionate (şefkatli), sensitive (duyarlı), sympathetic (sevecen/sempatik), forgiving (hoşgörülü), and warm (sıcakkanlı). Items of intelligence sub-dimension of the revised scale (α =.79) are intelligent (zeki), educated (eğitimli), clever (akıllı), and knowledgeable (bilgili). I additionally generated items of wise (bilge/alim) and intellectual (entellektüel/aydın) for intelligence dimension. Items of dedication sub-dimension of the revised scale are dedicated (kendini işine adamış), motivated (motivasyonu yüksek), and hardworking (çalışkan) (α = .77). For dynamism sub-scale, overlapping items are energetic (enerji dolu), strong (güçlü, sağlam), and dynamic (dinamik) (α = .70). I also included items bold (cesur) and charismatic (karizmatik bir kişilik) reported in dynamism sub-scale of Offermann's original scale. In sum, I added all these 22 items, which coincide with original scale items of Offermann et al. and evidences on attributes of ILTs in Turkish contexts (e.g., Bayazıt et al., under preparation; Kabasakal et al., 2011; Kabasakal & Bodur, 2007; Özalp-Türetgen & Cesur, 2010; Tabak et al., 2013).

I generated additional 18 items basing on other most frequent leadership prototypes of employees in Turkey reported in our qualitative study (Bayazıt et al., under preparation). These are supportive (destekleyici), motivator (motive edici), encouraging (teşvik edici/cesaret veren), good communicator (iletişimi kuvvetli), far-sighted (ileri görüşlü), decisive (kararlı), self-confident (kendine güvenen), rational (mantıklı), able to exert authority (otoritesini kullanabilen). Others are fair (adaletli), honest (dürüst), trustworthy (güvenilir), strong personality (karakter sahibi), objective (objektif/duygularını işe karıştırmayan), professional (profesyonel), transparent (şeffaf/açık sözlü), and consistent (tutarlı).

Scaling. The final version of the scale hence included 40 items (see, Appendix D). Each item is rated on 7-point Likert scales, ranging from 1 (not at all characteristic) to 7 (extremely characteristic). To assess the content of leadership prototypes, I asked

respondents to consider an *ideal municipality mayor* in the current work context (municipality).

Factor structure and reliability. In order to assess the construct validity of ILTs scale, I conducted Exploratory Factor Analysis (EFA) with principal component analysis and varimax rotation on all 40 items at Phase 1. The results indicate a 4-factor solution explaining 79.59% of total variance. Item loadings are above .40 with relatively few cross-loadings. I also explored 2-factor, 3-factor, 5-factor and 6-factor solutions. Loadings and item contents are more appropriately distributed for the 4-factor solution and therefore I accepted the 4-factor structure. Table 3.10a presents the loadings, eigenvalues, the percentage of variances explained by a given factor and internal consistencies (Cronbach alpha coefficients).

Twenty items load on the first factor, explaining 27.64% of the total variance. Item contents of the first factor is about leader integrity (e.g., being fair, trustworthy, honest, transparent, rational, consistent, objective and having strong character) as well as leader benevolence (e.g., encouraging, supportive, motivator and understanding). Understanding is also related to the sensitivity sub-scale of the original ILTs (Offermann et al., 1994) and as seen on Table 3.10a, it cross-loads at Factor 3 (see, below). Besides, items of being productive, effective communicator and far-sighted also load on this factor. The factor has high internal consistency ($\alpha = .98$).

The second factor accounts for 21.09% of the total variance and includes 12 items. Item contents correspond to items of dynamism and dedication dimensions originally reported by Offermann and colleagues (1994) as well as Epitropaki and Martin (2004). Items such as bold, dynamic, energetic, and strong are items of the dynamism sub-scale of the original version. Items such as motivated, hard working, and dedicated are original items of the dedication sub-scale. Items professional, self-confident and decisive are similar to dedication, whereas items such as charismatic and able to exert authority are related to dynamism. The factor has high internal consistency ($\alpha = .96$).

Table 3.10a.
Loadings of 4-Factor Solution of Implicit Leadership Theories (ILTs) Scale at Phase 1

Items		Factor loadings			
		Integrity& Benevolence	Dynamism Dedication	Sensitivity	Intelligence
ILT1	Fair (Adaletli)	**.828**			.318
ILT16	Trustworthy (Güvenilir)	**.828**	.328		
ILT10	Honest (Dürüst)	**.821**			
ILT32	Transparent (Şeffaf. açık sözlü)	**.742**	.335	.351	
ILT25	Rational (Mantıklı)	**.733**		.327	.406
ILT37	Consistent (Tutarlı)	**.728**	.441		
ILT36	Encouraging (Teşvik edici, cesaret veren)	**.716**	.349	.315	.302
ILT19	Effective communicator (İletişimi kuvvetli)	**.686**	.417		.318
ILT38	Productive (Üretken)	**.676**	.399		.371
ILT8	Supportive (Destekleyici)	**.671**	.315	.400	
ILT27	Motivator (Motive edici)	**.659**	.373	.394	.346
ILT28	Objective (Objektif. duygularını işe karıştırmayan)	**.642**			.391
ILT20	Strong personality (Karakter sahibi)	**.622**		.359	.368
ILT18	Far-sighted (İleri görüşlü)	**.617**	.385		.428
ILT3	Understanding (Anlayışlı)	**.579**		**.573**	
ILT7	Bold (Cesur)		**.805**		
ILT29	Able to exert authority (Otoritesini kullanabilen)	.302	**.748**		
ILT9	Dynamic (Dinamik)	.425	**.745**		.314
ILT6	Hard-working (Çalışkan)		**.738**		.337
ILT13	Energetic (Enerji dolu)		**.720**		.337
ILT15	Strong (Güçlü, sağlam)	.396	**.720**		
ILT21	Decisive (Kararlı)	.427	**.693**		.345
ILT24	Dedicated (Kendini işine adamış)		**.673**	.304	
ILT23	Self-confident (Kendine güvenen)	.506	**.608**		.349
ILT26	Motivated (Motivasyonu yüksek)	.426	**.566**	.315	.438
ILT30	Professional (Profesyonel)	.470	**.504**		.473
ILT22	Charisma (Karizmatik bir kişilik)		**.403**	.356	.396
ILT35	Warm (Sıcakkanlı)			**.797**	
ILT33	Compassionate (Şefkatli)	.364		**.782**	
ILT34	Sympathetic (Sevecen sempatik)		.329	**.749**	
ILT39	Helpful (Yardımcı)	.535	.325	**.673**	
ILT17	Forgiving (Hoşgörülü)	.482		**.663**	.337
ILT31	Sincere (Samimi içten)	.573		**.658**	
ILT11	Sensitive (Duyarlı)	**.593**	.302	**.598**	
ILT12	Educated (Eğitimli)	.326	.306		**.760**
ILT5	Knowledgeable (Bilgili)	.395	.393		**.727**
ILT2	Clever (Akıllı)		.487		**.725**

	Items	Integrity& Benevolence	Dynamism Dedication	Sensitivity	Intelligence
ILT40	Intelligent (Zeki)		.484		**.711**
ILT14	Intellectual (Entellektüel, Aydın)				**.701**
ILT4	Wise (Bilge, alim)		.326		**.511**
	Eigenvalues	26.71	2.49	1.50	1.14
	Variance Accounted (%)	27.64 %	21.09 %	15.55 %	15.32 %
	Cronbach Alpha	.98	.96	.97	.91

Note. *N* = 287. Factor loading lower than .30 was omitted for the sake of clarity. Numbers in bold present the factor on which the item is loading highest.

The third factor consists of seven items, accounting the 15.55% of total variance. The factor corresponds to the sensitivity factor in the original scale and includes warm, sympathetic, compassionate, helpful, sincere, forgiving, and sensitive (Epitropaki & Martin, 2004; Offermann et al., 1994). As mentioned above and can be seen at Table 3.10a, the item understanding also loads on this factor and the item sensitive cross-loads at the first factor. The factor has high internal consistency ($\alpha = .97$).

The fourth factor has six items explaining 15.32% of total variance. Items are related to the intelligence sub-scale of the original version (Epitropaki & Martin, 2004; Offermann et al., 1994), including intelligent, clever, knowledgeable, educated, wise and intellectual. The Cronbach alpha coefficient, .91, suggests an acceptable level of internal consistency.

Seven items of the third factor and the item "understanding" reflect sensitivity characteristics in leadership prototypes. Eight items of the third factor (i.e., bold, able to exert authority, dynamic, energetic, strong, decisive, self-confident, and charisma) are related to dynamism. Given that I focus on the change in sensitivity factor, I re-run EFA only on these 16 items. As Table 3.10b shows, the results clearly support the 2-factor solution.

Table 3.10b.
Loadings of 2-Factor Solution of 16 Items of Implicit Leadership Theories (ILTs) Scale at Phase 1

			Factor loadings	
Factor	Items		Sensitivity	Dynamism
Sensitivity	ILT31	Sincere (Samimi içten)	**.854**	.338
	ILT33	Compassionate (Şefkatli)	**.848**	.339
	ILT39	Helpful (Yardımcı)	**.844**	.389
	ILT17	Forgiving (Hoşgörülü)	**.836**	.344
	ILT35	Warm (Sıcakkanlı)	**.826**	.334
	ILT11	Sensitive (Duyarlı)	**.821**	.422
	ILT3	Understanding (Anlayışlı)	**.806**	.324
	ILT34	Sympathetic (Sevecen sempatik)	**.755**	.388
Dynamism	ILT9	Dynamic (Dinamik)	.384	**.862**
	ILT15	Strong (Güçlü, sağlam)	.371	**.840**
	ILT7	Bold (Cesur)		**.834**
	ILT13	Energetic (Enerji dolu)	.355	**.811**
	ILT21	Decisive (Kararlı)	.417	**.808**
	ILT29	Able to exert authority (Otoritesini kullanabilen)		**.799**
	ILT23	Self-confident (Kendine güvenen)	.394	**.762**
	ILT22	Charisma (Karizmatik bir kişilik)	.369	**.536**
		Eigenvalues	6.46	6.01
		Variance Accounted (%)	40.39 %	37.53 %
		Cronbach Alpha	.95	.94

N = 287. *Note*. Factor loadings lower than .30 are omitted for the sake of clarity. Numbers in bold present the factor on which the item loading is highest.

To confirm the 2-factor structure of the 16-item version of ILTs scale, I conduct CFA on only the control group at Phase 3[6]. CFA supports the 2-factor structure, χ^2 (103) = 290.686, $p < .001$, CFI = .90, TLI = .91, RMSEA (90% CI) = .10 (.09-.11), in comparison to the 1-factor model, $\Delta\chi^2 = 212.370$, $\Delta df = 1$, $p < .001$. Table 3.10c presents the unstandardized loadings (standard errors) and standardized loadings for 2-factor CFA model of ILTs scale with 16 items at Phase 3 for only the control group.

[6] I did not predict any change in leadership prototypes of the control group given the empirical evidences that suggested the persistence of implicit leadership theories even after one-year period (see, Epitropaki & Martin, 2004).

Table 3.10c.
Unstandardized Loadings (Standard Errors) and Standardized Loadings for 2-Factor CFA Model of ILTs Scale with 16 Items at Phase 3 for Only the Control Group

Factor	Items	Unstandardized (Standard Error)	Standardized
Sensitivity	ILT11. Sensitive (Duyarlı)	1.000 (.000)	.932
	ILT31. Sincere (Samimi, içten)	1.037 (.067)	.932
	ILT39. Helpful (Yardımcı)	.955 (.069)	.901
	ILT17. Forgiving (Hoşgörülü)	1.042 (.077)	.899
	ILT35. Warm (sıcakkanlı)	.873 (.075)	.846
	ILT33. Compassionate (Şefkatli)	.887 (.087)	.804
	ILT34. Sympathetic (Sevecen, sempatik)	.928 (.109)	.737
	ILT3. Understanding (Anlayışlı)	.873 (.103)	.734
Dynamism	ILT13. Energetic (Enerji dolu)	2.251 (.507)	.956
	ILT9. Dynamic (Dinamik)	2.302 (.518)	.949
	ILT15. Strong (Güçlü, sağlam)	2.183 (.497)	.897
	ILT7. Bold (Cesur)	1.736 (.434)	.705
	ILT21. Decisive (Kararlı)	1.525 (.390)	.652
	ILT22. Charismatic (Karizmatik bir kişilik)	2.059 (.539)	.634
	ILT23. Self-confident (Kendine güvenen)	1.249 (.331)	.607
	ILT29. Able to exert authority (Otoritesini kullanabilen)	1.000 (.000)	.567

N = 121. *Note.* The correlation between sensitivity and dynamic latent variables is .71, $p < .001$. All item loadings are significant at $p < .001$.

In the final version of ILTs scale, the sensitivity sub-scale is composed of items sensitive, sincere, forgiving, helpful, sympathetic, compassionate, understanding and warm (α = .94 for the exposure group; α = .96 for the control group). The dynamism sub-scale is composed of items strong, energetic, decisive, dynamic, professional, bold, charisma and able to exert authority (α = .92 for the exposure group; α = .91 for the control group).

3.2.6. Perceived Agentic and Communal Characteristics of the Municipality Mayor

I assessed the perceived communal and agentic characteristics of their municipality mayor by instructing respondents to think of the *actual manager* (the current municipality mayor) in ILT scale (see, ILTs scale above). The scale includes the 40 items developed in ILTs scale (see, Appendix E). Each item is rated on a 7-point Likert scale, ranging from 1 (not at all characteristic) to 7 (extremely characteristic). I

measured this construct twice at Phase 1 and at Phase 2. I utilized Phase 1 score to conduct EFA and Phase 2 score in hypothesis testing.

Factor structure & reliability. In order to test the construct validity of perceived agency-communal characteristics of the municipality mayor scale, I conduct EFA with principal component analysis and varimax rotation (40 items) at Phase 1 scores. The results indicate 3-factor solution explaining 82.03% of total variance. I also examine the 2-factor, 4-factor and 5-factor solutions, yet loadings and item contents are more appropriately distributed for the 3-factor solution (see, Table 3.11a).

Twenty-two items load on the first factor explaining 38.88% of the total variance. First eight items load on the factor that is related to the sensitivity sub-dimension of ILTs scale (i.e., sincere, understanding, compassionate, sensitive, warm, helpful, forgiving and sympathetic). Other items of the factor reflect leader support (i.e., motivator, encouraging, supportive and effective communicator) and integrity (i.e., fair, trustworthy, transparent, honest, rational, strong character, consistent and objective). The factor also has items far-sighted and charisma. Overall, the integrity/benevolence and sensitivity sub-dimensions of ILTs scale merge within this factor reflecting communal characteristics. The Cronbach alpha coefficient is .92, indicating an acceptable level of internal consistency.

Thirteen items load on the second factor explaining 28.30% of the total variance. Items are related to constructs of dynamism (i.e., dynamic, strong, self-confident, energetic, decisive and bold) and dedication (i.e., hardworking, dedicated, productive, professional and motivated). Similar to ILTs scale, able to exert authority also loads in this factor. However, item related to integrity (i.e., consistent) and intelligence dimension (i.e., intelligent and clever) also cross-load on this factor. The Cronbach alpha coefficient for this factor is .90, indicating an acceptable level of internal consistency.

The remaining five items load on the third factor explaining 16.85% of the total variance. These items correspond to intelligence sub-scales, such as educated, knowledgeable, intellectual and wise. Motivated, a dedication item, also loads on this factor. The factor has high internal consistency ($\alpha = .94$).

Table 3.11a.

Three Factor Structure of Perceived Agency-Communal of Municipal Mayor Scale at Phase 1

	Items	Communality	Agency	Intelligence &Dedication
PFM31	Sincere (Samimi, içten)	**.862**		.332
PFM3	Understanding (Anlayışlı)	**.846**	.310	
PFM33	Compassionate (Şefkatli)	**.842**		
PFM11	Sensitive (Duyarlı)	**.834**	.338	
PFM35	Warm (Sıcakkanlı)	**.824**		.383
PFM39	Helpful (Yardımcı)	**.823**	.388	
PFM17	Forgiving (Hoşgörülü)	**.806**		.430
PFM34	Sympathetic (Sevecen sempatik)	**.805**	.338	
PFM27	Motivator (Motive edici)	**.793**	.302	.385
PFM36	Encouraging (Teşvik edici, cesaret veren)	**.787**	.446	
PFM8	Supportive (Destekleyici)	**.757**	.309	.416
PFM1	Fair (Adaletli)	**.739**	.328	.438
PFM16	Trustworthy (Güvenilir)	**.729**	.537	
PFM18	Far-sighted (İleri görüşlü)	**.694**	.522	
PFM32	Transparent (Şeffaf. açık sözlü)	**.692**	.547	
PFM19	Effective communicator (İletişimi kuvvetli)	**.662**	.379	.464
PFM10	Honest (Dürüst)	**.646**	**.603**	
PFM25	Rational (Mantıklı)	**.645**	.475	.432
PFM20	Strong personality (Karakter sahibi)	**.623**	**.615**	
PFM37	Consistent (Tutarlı)	**.585**	.500	.436
PFM28	Objective (Objektif. duygularını işe karıştırmayan)	**.548**	.452	.452
PFM22	Charisma (Karizmatik bir kişilik)	**.535**	**.514**	.342
PFM6	Hard-working (Çalışkan)		**.832**	.339
PFM29	Able to exert authority (Otoritesini kullanabilen)	.309	**.815**	
PFM9	Dynamic (Dinamik)	.318	**.809**	.337
PFM15	Strong (Güçlü, sağlam)	.327	**.808**	.354
PFM23	Self-confident (Kendine güvenen)	.401	**.739**	.334
PFM13	Energetic (Enerji dolu)	.456	**.715**	
PFM38	Productive (Üretken)	.568	**.693**	
PFM24	Dedicated (Kendini işine adamış)		**.673**	.508
PFM21	Decisive (Kararlı)	.394	**.644**	.452
PFM7	Bold (Cesur)	.312	**.619**	**.591**
PFM2	Clever (Akıllı)	.356	**.607**	**.546**
PFM30	Professional (Profesyonel)	.520	**.607**	
PFM40	Intelligent (Zeki)	.371	**.598**	**.500**
PFM12	Educated (Eğitimli)	.307	.373	**.781**
PFM5	Knowledgeable (Bilgili)		.482	**.746**
PFM14	Intellectual (Entellektüel. Aydın)	.529	.346	**.638**
PFM26	Motivated (Motivasyonu yüksek)	.421	.536	**.614**
PFM4	Wise (Bilge, alim)	.463	.359	**.594**
	Eigenvalues	29.01	2.61	1.18
	Variance accounted for (%)	38.88%	28.30%	16.85%
	Cronbach Alpha coefficient	.92	.90	.96

Note. *N* = 272. Factor loadings lower than .30 are omitted for the sake of clarity.

Given that I focus on only agentic and communal characteristics of the mayor, I conduct additional EFA with principal component analysis and varimax rotation on the eight items related to communal characteristics (i.e., sensitivity) and the eight items of the second factor related to agency (i.e., dynamism). Communality items are PFM31-sincere, PFM3-understanding, PFM33-compassionate, PFM35-warm, PFM11-sensitive, PFM39-helpful, PFM17-forgiving, PFM34-sympathatic, and PFM22-charisma. Items related to agency are PFM15-strong, PFM9-dynamic, PFM21-decisive, PFM23-self-confident, PFM29-able to exert authority, PFM13-energetic and PFM7-bold. EFA on 16 items supports the 2-factor model explaining 84.55% of the total variance. Table 3.11b shows item loadings. The Cronbach alpha coefficients of these factors are .97 and .98, respectively.

Table 3.11b.
Loadings of 16 Items of Perceived Agency-Communality of Municipal Mayor Scale

Factor	Items		Communality	Agency
Communality	PFM31	Sincere (Samimi, içten)	**.888**	.322
	PFM3	Understanding (Anlayışlı)	**.867**	.343
	PFM33	Compassionate (Şefkatli)	**.860**	.336
	PFM35	Warm (Sıcakkanlı)	**.859**	.378
	PFM11	Sensitive (Duyarlı)	**.854**	.406
	PFM39	Helpful (Yardımcı)	**.851**	.407
	PFM17	Forgiving (Hoşgörülü)	**.814**	.433
	PFM34	Sympathetic (Sevecen sempatik)	**.807**	.418
	PFM22	Charisma (Karizmatik bir kişilik)	**.690**	.478
Agency	PFM15	Strong (Güçlü, sağlam)	.358	**.878**
	PFM9	Dynamic (Dinamik)	.415	**.857**
	PFM21	Decisive (Kararlı)	.322	**.847**
	PFM23	Self-confident (Kendine güvenen)	.374	**.839**
	PFM29	Able to exert authority (Otoritesini kullanabilen)	.326	**.825**
	PFM13	Energetic (Enerji dolu)	.459	**.781**
	PFM7	Bold (Cesur)	.423	**.781**
		Eigenvalues	7.30	6.23
		Variance accounted for (%)	45.64	38.91
		Cronbach alpha	.97	.98

Note. $N = 272$.

I conduct CFA to validate the 2-factor structure of the scale with 16 items for the control group. CFA supports the 2-factor structure in comparison to the 1-factor model,

$\Delta\chi^2$ = 860.19, Δdf = 1, p < .001. The fit indices of 2-factor structure model are at acceptable levels, χ^2 = 650.262, df = 103, p < .001, CFI = .90, TLI= .89, RMSEA (90% CI) = .10 (.09-.11). Table 3.11c presents the unstandardized and standardized loadings of the 2-factor CFA model of perceived agency-communal characteristics of the municipality mayor scale with 16 items at Phase 2 in the control group.

Table 3.11c.
Unstandardized Loadings (Standard Errors) and Standardized Loadings for the 2-Factor CFA Model of 16 Item Perceived Agency/Communality of Municipal Mayor Scale at Phase 2 for only the Control Group

Factor	Items		Unstandardized (Standard Error)	Standardized
Communality	PFM39	Helpful (Yardımcı)	1.051 (.037)	.960
	PFM11	Sensitive (Duyarlı)	1.060 (.038)	.955
	PFM31	Sincere (Samimi, içten)	1.068 (.040)	.944
	PFM17	Forgiving (Hoşgörülü)	1.070 (.041)	.940
	PFM33	Compassionate (Şefkatli)	1.032 (.040)	.937
	PFM3	Understanding (Anlayışlı)	1.000 (.000)	.930
	PFM35	Warm (Sıcakkanlı)	1.091 (.047)	.907
	PFM34	Sympathetic (Sevecen sempatik)	1.043 (.047)	.895
Agency	PFM15	Strong (Güçlü, sağlam)	.994 (.040)	.936
	PFM9	Dynamic (Dinamik)	.963 (.040)	.925
	PFM13	Energetic (Enerji dolu)	1.000 (.000)	.919
	PFM7	Bold (Cesur)	.988 (.050)	.868
	PFM23	Self-confident (Kendine güvenen)	.847 (.046)	.840
	PFM21	Decisive (Kararlı)	.899 (.054)	.808
	PFM29	Able to exert authority (Otoritesini kullanabilen)	.810 (.052)	.779
	PFM22	Charisma (Karizmatik bir kişilik)	.965 (.070)	.727

N = 108. *Note*. The correlation between communal and agency latent variables was .70, p < .001.

Communality sub-scale is composed of items understanding, sincere, compassionate, helpful, sensitive, warm, sympathetic and forgiving (α = .98 in the exposure group; α = .98 in the control group). Agency sub-scale is composed of items energetic, charismatic, decisive, bold, able to exert authority, dynamic, self-confident and strong (α = .95 in the exposure group; α = .96 in the control group).

3.2.7. Perceived quantity of interaction

I assessed employees' quantity of interaction with the mayor by asking the frequency of direct interaction with and observation of mayor. I adopted the six-item leader–follower communication frequency scale of Kacmar, Witt, Zivnuska and Gully (2003) to municipality context.

Item adoption. The original scale of Kacmar and colleagues (2003) asks the frequency of the following interactions. It asks a) writing memos to boss, b) receiving memos from boss, c) initiating face-to-face conversations with boss, d) having face-to-face conversations with boss that were initiated by him/her. It also includes questions on e) sending boss an e-mail message, f) receiving an e-mail from boss, g) calling boss on the phone, and h) receiving phone call from boss (α = .84).

Basing on informal conversations with municipality employees, I revised and utilized items of Kacmar and colleagues (2003) to adapt to the municipality context. Informal conversations and my observations during field trips revealed a wide range of contact with the mayor depending on department type, organizational size and the characteristics of the mayor. For example, employees in the department of public relations mostly accompany mayor during his/her daily/weekly public visits, whereas technical civil servants in the department of real estate may not see the mayor for weeks. In smaller municipalities, almost all employees see and greet the mayor, whereas in larger municipalities, some employees may only greet the mayor in the corridor. Yet, even in larger municipalities, some mayors make frequent visits to departments for informal inspections. Hence, I modified items considering such varying degrees of contact with the mayor.

Scale items. Current adopted scale asks the frequency of, 1) observing the mayor in the municipality or during municipality outdoor activities, 2) face to face greetings, 3) face to face communication, 4) sending e-mail to him/her, 5) receiving e-mail from him/her, 6) giving a phone call to him/her, 7) receiving phone call from him/her and 8) arranging meeting with him/her (see, Appendix F).

Scaling. Respondents evaluated the frequency of interaction on a 7-point Likert scale. Scale ranges from 1 "never", 2 "once in two months or more", 3 "couple of times in 3-4 week", 4 "once a week", 5 "couple of times in a week", 6 "almost every day" and

7 “couple of times in a day”. I measured the frequency of interaction with the mayor twice at Phase 1 and at Phase 2. I utilized Phase 1 score to conduct EFA and Phase 2 score in hypothesis testing. The higher scores reflect higher frequency of interaction with the mayor.

Factor structure and reliability. EFA with principal component analysis and varimax rotation on Phase 1 scores of Perceived Quantity of Interaction with Leader Scale gives 2-factor solution. Two-factor solution explains 84.92% of total variance. The first factor includes six items and the second one two items – i.e., sending e-mail to the mayor and receiving e-mail from him/her. These two items have low variance: most respondents give 0 (“Never”) on 8-point Likert scale. Field notes and low score variances suggest that e-mails might not be a relevant means of communication between civil servants and municipality mayor. I delete two items, and re-run EFA with remaining six items. The analysis reveals 1-factor solution explaining 77.66% of total variance. Table 3.12a shows the item loadings and Cronbach alpha coefficients of factors of the scale. Item loadings range from .84 to .92.

Table 3.12a.
Item Loadings of the Quantity of Interaction Scale with Six Items at Phase 1

Items	Factor loadings
QUAN2. Greeting mayor (Başkanla yüz yüze selamlaşma)	.92
QUAN3. Talking with mayor (Başkanla yüz yüze konuşma)	.89
QUAN1. Observing mayor (Başkanı yakından görme)	.89
QUAN6. Calling mayor via phone (Başkanı telefonla arama)	.87
QUAN8. Meeting with mayor (Başkanla toplantı)	.87
QUAN7. Receiving phone call from mayor (Başkanın telefonla araması)	.84
Eigenvalues	4.66
Variance accounted for (%)	77.66
Cronbach Alpha	.93

N = 276, EFA with Principal Component Analysis and Varimax Rotation

The Cronbach alpha coefficient is .93, indicating a high level of internal consistency. To validate the factor structure, I conduct CFA on Phase 2 scores of the control group. CFA reveals misfit to the 1-factor solution, $\chi^2 = 201.217$, $df = 9$, $p < .001$, CFI = .76, TLI= .59, RMSEA (90% CI) = .42 (.37-.47). Considering modification indices and item contents, the 2- factor model is tested. CFA with the 2-factor reveals a better fit, $\Delta\chi^2 = 168.787$, $\Delta df = 1$, $p < .001$. Table 3.12b shows unstandardized loadings (standard errors) and standardized loadings of the 2-factor solution.

Table 3.12b.
Unstandardized Loadings (Standard Errors) and Standardized Loadings of 2-Factor Perceived Quantity of Interaction with the Mayor Scale

Factor	Items	Unstandardized (Standard Error)	Standardized
Quantity of Distant Interaction	QUAN2. Greeting mayor (Başkanla yüz yüze selamlaşma)	1.064 (.065)	.96
	QUAN1. Observing mayor (Başkanı yakından uzaktan görme)	1.000 (.000)	.87
	QUAN3. Talking with mayor (Başkanla yüz yüze konuşma)	.896 (.071)	.85
Quantity of Close Interaction	QUAN6. Calling mayor via phone (Başkanı telefonla arama)	1.000 (.000)	.99
	QUAN8. Meeting with mayor (Başkanla toplantı)	.947 (.031)	.96
	QUAN7. Receiving phone call from mayor (Başkanın telefonla araması)	.858 (.065)	.78

N = 124. Note. 2-Factor solution: χ^2 = 32.430, *df* = 8, *p* < .01, CFI = .96, TLI= .92, RMSEA (90% CI) = .09 (.08-.10). Cronbach alpha coefficient of overall scale = .93; Cronbach alpha coefficient for Quantity of Distant Interaction sub-scale = .92; Cronbach alpha coefficient for Quantity of Close Interaction sub-scale = .93.

Each factor includes three items. Items are on the frequency of distant and formal communication with the mayor (e.g., QUAN2-face to face greetings). Therefore, I name the factor as Quantity of Distant Interaction. Its internal consistency is at acceptable level (α = .92). Second factor is related to the frequency of close communication with mayor such as exchange of phone calls. Therefore, I name it as Quantity of Close Interaction. The internal consistency of this factor is at an acceptable level (α = .93).

3.2.8. Leader member exchange quality

I used Leader-Member Exchange Multidimensional Measure (LMX-MDM) to assess civil servants' perceptions on the quality of their relationship with the mayor. LMX-MDM is a 12-item scale developed by Liden and Maslyn (1998) and translated to Turkish by Erdogan, Kraimer and Liden (2004). Items are evaluated on 5-point Likert scale, ranging from 1 "Never" and 5 "Always" (see, Appendix G). The scale consists of four sub-scales, affect, loyalty, contribution and professional respect. I utilize affect and professional respect sub-scales in the study, because items of loyalty and contribution sub-scales are not relevant for the municipality context. Samples items are "I like my

leader very much as a person." for affect subscale (α = .90) and "I admire my leader's professional skills." for professional respect sub-scale (α = .92). In the current study, I use the word "municipality mayor" instead of the word "leader" in the statements. I provide the scale to participants twice - at Phase 1 to conduct CFA and at Phase 2 to utilize scores in hypotheses testing. The higher scores reflect higher perceived quality of relationship with the mayor.

I conduct confirmatory factor analysis (CFA) on Phase 1 scores. CFA reveals a good fit to 2-factor solution as predicted, χ^2= 18.980, *df* = 8, $p < .05$, CFI = .98, TLI= .97, RMSEA (90 % CI) = .08 (.04-.13). Two factors represent affective LMX (α = .93) and professional respect LMX (α = .95). The coefficient for overall scale is .95, all of which indicated good internal consistency in line with previous findings (Erdogan et al., 2004; Liden & Maslyn, 1998).

3.2.9. Perceived interactional justice scale

Employees' perception on the mayor's interactional justice was assessed with the interactional fairness sub-scale of organizational justice measure of Niehoff and Moorman (1993). Five items are evaluated on 5-point Likert scale (α= .90). Scale ranges from 1 "Never" and 5 "Always". A sample item is "(The leader) treats employees with respect and dignity." (see, Appendix H). Higher scores reflect higher perceptions of interactional justice. I measured perceived interactional justice twice at Phase 1 to conduct CFA and at Phase 2 to test hypothesis.

CFA reveals a misfit to the 1-factor model of five items, χ^2= 80.956, *df* = 5, $p < .001$, CFI = .90, TLI= .79, RMSEA = .35 (90% CI = .28-.41). Regarding low variance of item IJ3 (considers employee rights), its high correlation with other items (above .90) and modification indices, I extract this item and re-run CFA on other four items. CFA on four items of interactional justice scale representing one latent factor has an acceptable level of fit, χ^2= 6.438, *df* = 2, $p < .05$, CFI = .99, TLI= .97, RMSEA = .09 (90% CI = .06-.13). Four items have high internal consistency (α = .96).

I conduct a second-order CFAs representing the quality of interaction with the mayor. Affective LMX, professional respect LMX and interactional justice constitute

first order latent factors. The model has an acceptable level of fit, χ^2= 63.231, *df* = 32, *p* < .01, CFI = .98, TLI= .97, RMSEA (90 % CI) = .08 (.05-.11). Table 3.13 presents the unstandardized coefficients (standard errors) and standard coefficients of the model.

Table 3.13.
Unstandardized Loadings (Standard Errors) and Standardized Loadings of CFA Model of Quality of Interaction as Second Order Latent Factor (Control Group, Phase 1 Scores)

Factor	Items	Unstandardized (Standard Error)	Standardized
LMX-Affective	LMX2. Pleasure to work with the leader (Bu kişi ile çalışmak zevklidir.)	1.449 (.138)	.936
	LMX4. Liking (Bu kişiyi insan olarak severim.)	1.000 (.000)	.889
	LMX1. Friendship (Bu kişi herkesin arkadaş olmayı isteyeceği türde bir insandır.)	1.323 (.131)	.741
LMX-Professional respect	LMX5. Respect the leader's knowledge/expertise (İş yerindeki bilgi ve uzmanlığına saygı duyarım.)	.993 (.059)	.938
	LMX6. Affected by job knowledge (İşine yönelik bilgisinden etkilenirim.)	.964 (.061)	.918
	LMX3. Admire competencies (Bu kişinin mesleki becerilerine hayranlık duyarım.)	1.000 (.000)	.905
Interactional justice	IJ2. Treat with respect and dignity (Çalışana saygılıdır ve itibar eder.)	1.007 (.047)	.950
	IJ5. Treat with kindness (Çalışanlara nazik davranır.)	1.000 (.000)	.942
	IJ1. Treat with a truthful manner (Çalışana doğru ve içten davranır.)	1.036 (.056)	.892
	IJ4. Sensitive to needs (Çalışanın ihtiyaçlarına duyarlılık gösterir.)	.946 (.059)	.879

N = 124. Note. The correlation between LMX-affective and LMX-professional = .89. The correlation between LMX-affective and Interactional Justice = .92. The correlation between LMX-prof. respect and Interactional justice = .74.

3.2.10. Perceived leadership success

I measured perceived leadership success by developing a 12-item scale on perceived municipality performance scale (see, Appendix I).

Item generation. I adopted items of Delaney and Huselid's (1996) perceived organizational performance scale to municipality context by considering the legal duties and responsibilities of mayors (Ö. Köseoğlu, personal communication, July 27, 2014;

Municipal law no: 5393, 2005). I provided earlier version of the adopted scale to employees in human resource departments and strategic development units in a convenient sample of municipalities (i.e., Üsküdar municipality, Şişli municipality) and revised according to their feedbacks.

The final version of the scale asks employees' their municipalities' and mayor's performance within the last six months (nearly 7 months after the local election). Four items correspond to the responsibilities legally expected from a successful mayor and municipalities. As stated before these responsibilities are as following (Municipal law no: 5393, 2005): 1) protecting municipality's rights and interest, 2) appropriate and timely planning of municipality strategies and activities, 3) adherence to strategic plans and 4) the efficient management of budgeting.

Conversations with municipality employees revealed that other potential and highly visible indicators of the performance of a municipality and therefore mayor were the quality of basic services: 5) waste management/cleaning services, 6) the constructions of streets, park and gardens, 7) cultural/sportive/ social activities as well as 8) the development of new activities/services for district citizens. In addition, 9) employees' satisfaction from working in the municipality were mostly reported as a general indicator. When probed, employees reported that the main determinant of such organizational satisfaction in municipalities and therefore the performance of the municipality in the eyes of employees are as follows: 10) the quality of interaction among managers/chiefs and subordinates, as well as 11) the selection/promotion of employees to specific roles/positions based on employees' skills/knowledge. I also added a general item on 12) the effective management and administrative skills of the municipality mayor.

Scaling. Respondents rated each item on 10-point Likert scale ranging from 10% "Below the expected level. Should be improved more" to 100 % "Above the expected level. Excellent". The higher scores reflect higher perceived organizational performance. I assessed the perceived performance of the mayor via this scale twice at Phase 1 to conduct EFA and Phase 2 for the hypothesis testing.

Factor structure and reliability. In order to estimate the construct validity of Municipality Organizational Performance Scale, I conduct EFA with principal component analysis and varimax rotation on 12 items. The results reveal 1-factor

solution explaining 71.14% of variance. Item loadings range from .91 to .76 as shown on Table 3.14a.

Table 3.14a.
Exploratory Factor Loadings and Internal Consistency of Municipality Organizational Performance Scale (Phase 1)

Item	Factor loadings
PERF12. General performance of mayor (Belediye başkanın genel performansı)	.912
PERF11. Adherence to plans (Önceden yapılan planlara uygun faaliyetlerinin yerine getirilmesi)	.891
PERF1. Adequate recruitment of personnel (Belediye çalışanlarının bilgi ve becerilerine uygun pozisyonlara yerleştirilmesi)	.874
PERF6. Adequate planning of municipality strategies/functions (Belediye stratejilerinin/faaliyetlerinin uygun şekilde önceden planlanması)	.870
PERF9. The quality of services such as the construction of road, park and gardens (Belediyenin ilçedeki yol, park ve bahçe gibi hizmetlerinin kalitesi)	.863
PERF2. General employee satisfaction (Belediye çalışanlarının genel olarak bu belediyede çalışmaktan memnun olması)	.852
PERF4. Budget management (Belediye gelir-giderlerinin verimli bir şekilde yönetilmesi)	.850
PERF7. New facilities and services offered to district citizens (Belediyede ilçe halkına yönelik yeni etkinlikler ve hizmetlerin getirilmesi)	.831
PERF5. Protection of municipality rights (Belediye haklarının ve menfaatlerinin korunması)	.830
PERF3. The quality of relationship among managers-subordinates (Belediye çalışanlarının genel olarak üstleriyle-müdürleriyle iletişimi ve ilişkilerinin kalitesi)	.814
PERF9. The quality of waste management services (Belediyenin ilçedeki temizlik ve atık/çöp toplama hizmetlerinin kalitesi)	.791
PERF8. The adequacy of cultural, sportive and social services (Belediyenin ilçe halkına sunulan kültürel, sportif ve sosyal hizmetlerin yeterliliği)	.762
Eigenvalues	8.54
Variance accounted for (%)	71.14
Cronbach Alpha	.96

N = 272. Exploratory factor analysis with Principal Component Analysis and Varimax Rotation

The Cronbach alpha coefficient is .96, indicating high internal consistency of municipality organizational performance scale. To validate the 1-factor model of the scale, I conduct CFA on Phase- 2 scores of the control group. Fit indices suggest misfit to the 1-factor model, χ^2= 223.651, *df* = 54, $p < .001$, CFI = .80, TLI= .76, RMSEA (90 % CI) = .20 (.18-.23). I tested the 2-factor, χ^2= 185.657, *df* = 53, $p < .01$, CFI = .85, TLI= .81, RMSEA (90 % CI) = .18 (.15-.21), and the 3-factor solutions, χ^2= 150.667, *df* = 51, $p < .01$, CFI = .94, TLI= .92, RMSEA (90 % CI) = .12 (.10-.15). Three-factor solution yields a better fit. The inspection of modification indices and descriptive statistics of individual items pinpoint a potential problem of item PERF7 (new facilities

and services provided to district public).The relatively high missing rate of this item particularly reveals that employees might have less information on novel public activities/services. Therefore, I extract this item and re-run CFA on 11 items with 3-factor model. The model has a better fit to the data, χ^2= 100.667, *df* = 41, $p < .01$, CFI = .96, TLI= .794, RMSEA (90 % CI) = .10 (.08-.14). Table 3.14b presents loadings of 3-factor CFA model of municipality organizational performance scale with 11 items.

Table 3.14b.
Unstandardized Loadings (Standard Errors) and Standardized Loadings for CFA Model of Perceived Performance of Municipality Scale at Phase 2 on the Control Group

Factor	Items of Perceived Performance of Municipality Scale	Unstandardized (Standard Error)	Standardized
Perceived Performance for Public Services	PERF 10. The quality of services such as the construction of road, park and gardens (Belediyenin ilçedeki yol, park ve bahçe gibi hizmetlerinin kalitesi)	1.000 (.000)	.919
	PERF 9. The quality of waste management services (Belediyenin ilçedeki temizlik ve atık/çöp toplama hizmetlerinin kalitesi)	.882 (.075)	.824
	PERF 8. The adequacy of cultural, sportive and social services (Belediyenin ilçe halkına sunulan kültürel, sportif ve sosyal hizmetlerin yeterliliği)	.851 (.068)	.802
Perceived Performance for Strategic Issues	PERF 6. Adequate planning of municipality strategies/functions (Belediye stratejilerinin/faaliyetlerinin uygun şekilde önceden planlanması)	1.059 (.061)	.935
	PERF 11. Adherence to plans (Önceden yapılan planlara uygun faaliyetlerinin yerine getirilmesi)	1.019 (.059)	.934
	PERF 5. Protection of municipality rights (Belediye haklarının ve menfaatlerinin korunması)	1.000 (.000)	.901
	PERF 4. Budget management (Belediye gelir-giderlerinin verimli bir şekilde yönetilmesi)	.995 (.070)	.864
Perceived Performance for Internal Issues	PERF 1. Adequate recruitment of personnel (Belediye çalışanlarının bilgi ve becerilerine uygun pozisyonlara yerleştirilmesi)	.966 (.074)	.893
	PERF 2. General employee satisfaction (Belediye çalışanlarının genel olarak bu belediyede çalışmaktan memnun olması)	1.000 (.000)	.844
	PERF 3. The quality of relationship among managers-subordinates (Belediye çalışanlarının genel olarak üstleriyle-müdürleriyle iletişimi ve ilişkilerinin kalitesi)	.840 (.070)	.811
	PERF12. General performance of mayor (Belediye başkanın genel performansı)	.866 (.060)	.887

N = 124. *Note*. Cronbach alpha for sub-scale of public services = .91; Cronbach alpha for sub-scale of strategic issues = .94; Cronbach alpha for sub-scale of internal relations = .92.

The first factor is composed of 3 items which are concerned with perceived performance related to services provided to the public, such as the quality of cleaning and waste management system (α = .91). The second factor is composed of four items which are related to perceived performance on strategic issues of municipality, such as the effectiveness of budget management (α = .94). The third factor is composed of four items on perceived performance for internal issues, such as employees' general organizational satisfaction as well as general performance of mayor (α = .92).

3.2.11. Follower gender identity

I measured gender identity with the revised Bem Sex Role Inventory (BSRI; Bem, 1974; Bem, 1981) at Phase 1. BSRI evaluates respondents' feminine and masculine gender role orientations. Dökmen (1991) translated and validated the original scale into Turkish. I utilize the 20-item Turkish version validated by Özkan and Lajunen (2005) (see, Appendix J). The scale consists of 10 items for masculinity sub-scale (α = .71) and10 items for femininity scale (α = .77). Masculine sub-scale includes characteristics that are culturally associated with men, such as assertive, and dominant. Feminine sub-scale involves characteristics that are perceived to reflect women, such as understanding and sympathetic.

Scaling and scoring. Each item is evaluated on a 7 point Likert scale, ranging from "definitely no" to "definitely yes". I do not utilize filler items, the neutral sub-scale (10 items), found in the original short version in order to shorten the scale. Besides, past findings showed gender differences on these items in Turkish samples, potentially disconfirming the neutrality of these items in Turkish culture (see, Özkan & Lajunen, 2005). I compute masculine and feminine scores for each participant. The higher masculinity or femininity scores reflect higher masculine or feminine gender role orientation, respectively.

Factor structure and reliability. In order to validate the BSRI, I conduct multiple group (male versus female participants) CFA. The analysis does not confirm the 2-factor solution with 20 items for male and female participants (Bem, 1981; Dökmen, 1992; Özkan & Lajunen, 2005), χ^2= 1359.38, *df* = 338, $p < .001$, CFI = .75,

TLI= .71, RMSEA (90 % CI) = .09 (.08-.10). I inspect the inter-item correlations as well as the exploratory factor analyses.

Past studies highlighted the lower validity of BSRI for males, but as in the current study, an equivalent factor structure for men and women in a student sample in Turkey was reported (Özkan & Lajunen, 2005). Considering the past findings, I conduct additional EFAs and CFAs by extracting problematic items one by one. Self-sufficient and strong personality items are originally masculine items but load on the femininity factor consistently in both samples. Moreover, two items – i.e., BSRI6-defends own beliefs as well as BSRI9-assertive – always cross-load on two latent factors in both gender groups. As discussed by Özkan and Lajunen (2005), the change in gender stereotypes in Turkey may incorporate these two instrumental characteristics as feminine roles. I, therefore, retain the former two items, but extract two consistently cross-loading items – i.e., BSRI6-defends own beliefs as well as BSRI9-assertive - and re-run multiple group CFA.

The analysis confirms 2-factor structure with 18 items both for males and for females, χ^2= 747.93, *df* = 268, $p < .001$, CFI = .89, TLI= .88, RMSEA (90 % CI) = .06 (.05-.07). Table 3.15 reports the loadings of 18 items. Findings indicated similar factor structure of BSRI for males and females (Bem, 1981; Dökmen, 1992; Özkan & Lajunen, 2005). All original femininity 10 items and additional two masculinity items – i.e., self-sufficient and strong personality – constitute the femininity factor in the female group ($\alpha = .89$) and the male group ($\alpha = .90$).

Six masculinity items (i.e., dominant, has leader abilities, willing to take a stand, willing to take risks, eager to soothe feelings and independent) compose the masculinity factor in the female group ($\alpha = .83$) and the male group ($\alpha = .80$). Given the findings that support 2-factor structure, and an acceptable level of factor internal consistencies, I calculated femininity and masculinity sub-scale scores for each participant.

Table 3.15.
Standardized Loadings of the 18-Item BSRI among Men and Women (Phase 1)

	Factor loadings for women			Factor loadings for men	
	Femininity	Masculinity		Femininity	Masculinity
BSRI17	**.818**		BSRI17	**.815**	
BSRI5	**.814**		BSRI19	**.779**	
BSRI19	**.776**		BSRI1	**.767**	
BSRI1	**.770**		BSRI18	**.734**	
BSRI11	**.720**		BSRI20	**.708**	
BSRI4	**.711**		BSRI11	**.691**	
BSRI8	**.614**		BSRI5	**.650**	
BSRI20	**.575**		BSRI15	**.644**	
BSRI10	**.538**		BSRI10	**.531**	
BSRI15	**.536**		BSRI4	**.531**	
BSRI18	**.409**		BSRI16	**-.469**	
BSRI16	**-.342**		BSRI8	**.465**	
BSRI3		**.879**	BSRI3		**.790**
BSRI14		**.805**	BSRI12		**.682**
BSRI12		**.755**	BSRI13		**.632**
BSRI2		**.530**	BSRI14		**.625**
BSRI7		**.504**	BSRI7		**.512**
BSRI13		**.369**	BSRI2		**.357**
Cronbach Alpha	.89	.83	Cronbach Alpha	.90	.80

N = 290 (153 females, 137 males). Note. Items are BSRI1. Understanding (anlayışlı), BSRI2. Independent (Bağımsız), BSRI3. Dominant (baskın), BSRI4. Loves children (çocukları seven), BSRI5. Take into account other people's feelings (diğer insanların duygularını önemseyen), BSRI7. Eager to soothe hurt feelings (duyguları teskin edici/duygularına hakim olabilen), BSRI8. Affectionate (duygusal), BSRI10. Self-sufficient (işe yarar ve becerikli), BSRI11. Gentle (kibar/nazik), BSRI12. Has leader abilities (lider özelliklerine sahip), BSRI13. Willing to take a stand (muhalif/muhalefet eden), BSRI14. Willing to take risks (risk alabilen), BSRI15. Strong personality (sağlam karakterli), BSRI16. Aggressive (saldırgan), BSRI17. Compassionate (şefkatli), BSRI18. Sympathetic (sempatik), BSRI19. Tender (sevecen), BSRI20. Warm (sıcakkanlı).

3.2.12. Participant characteristics

Participants' socio-demographic and work characteristics were assessed with Follower Information Form (see, Appendix K). Participant gender is dummy-coded as 1 for females and 2 for males. Age categories are originally 18-24 years, 25-30 years, 31-35 years, 36-40 years, 41-45 years, 46-50 years, 51-50 years, 56 and above years. For group level comparisons, I recode them into 18-30 years, 31-35 years, 36 and above years. The categories for the education levels are primary school, secondary school,

high school, vocational college, undergraduate and graduate level. For group level comparisons, I recode them into high school and below, vocational college, and bachelor/master degree. The categories for participants' tenure in the current municipality and municipality sector are 18-24 months, 2-5 years, 5-10 years, 10-15 years, 15-20 years, 20 and above years. For comparisons, I recode tenure as less than 5 years, 5 to 15 years, more than 15 years. I measured employees' individual-level previous exposure to women's leadership in their work life by asking a) whether they have worked with female managers before (0, 1), and b) the gender of the current unit manager (0, 1). I merge the two variables to obtain dummy coded variable of prior exposure to women manager (0, 1).

3.3.Data Collection Procedure

Sabancı University's Institutional Review Board – Research Ethics Council - approved human subject participation in the study (protocol number: SOM-14-09, 11/3/2014). During all phases of data collection, participants first read and signed the informed consent form (Appendix C). They created an identification number and entered only this number on tests and survey across three measurements to assure the confidentiality of data. I recorded and used these identification numbers, omitting any other information about the participants, such as names etc.

After reading the informed consent form, participants completed GL-IAT and P-IAT in a random order. Participants took IATs mostly in a quiet room in the municipality. If a room was not available, I asked them to wear earplugs. I verbally gave the instructions for quick and correct responding in one to one sessions and usually sat with them to avoid any potential distracters during the test.

Subsequent to IATs, I provided paper and pencil based self-report survey material to them to collect in the following day. I randomized the order of self-report surveys[7]. Besides, I provided IATs first and then survey material to participants at Phase 1. The findings on the order effect due to presenting IATs or survey material first were mixed and not conclusive (see, Nosek et al., 2005). Nosek and colleagues (2005)

[7] I numbered each survey and ordered them via random number generator for each survey packet. I prepared sets of such randomly ordered survey packets prior to municipality visits.

recommended counterbalancing to be on the safe side, if there is no compelling reason to give IAT or survey first. In the current context, the presentation of IAT was necessary to build rapport with participants. During pilot testing, I observed that participants were reluctant to participate after reading surveys on women mayor on survey material. To avoid such self-selection bias, participants took IAT first and filled the survey questions in the following day.

3.4.Data Analysis

Inquisit program automatically recorded IAT data. I entered self-report measure data into Excel files using the non-identifying codes participants created according to instructions. I conducted IAT scoring, descriptive statistics, Exploratory Factor Analysis and univariate analyses via SPSS v 17. I ran all latent variable analyses with maximum likelihood (ML) estimation methods using Mplus v.7 software (Muthen & Muthen, 1998-2012).

3.4.1. The scoring of GL-IAT and P-IAT

I calculated the improved D score for IAT data at each measurement period by accounting for latency variability and correct responses of each participant. Greenwald and colleagues (2003) analyzed large datasets of IATs and optimized D score transformations for IAT scoring. Recent evidence supports the superiority of the improved algorithm of D score over other transformation methods, such as log transformations (e.g., Lane et al., 2007; Nosek et al., 2007a; Richetin, Costantini, Perugini, Schönbrodt, 2015). The optimized D score is conceptually an individual effect size estimate, similar to Cohen's d (Nosek et al., 2007a).

As mentioned before, the basic assumption is that if two labels are strongly associated in mind compared to another pair, then the categorization of stimuli is quicker (lower latency) with fewer errors. *Latency* is the total milliseconds (ms) that elapsed between the presentation of stimulus on the middle of the screen and the

participants' response. *Correct response* refers to the categorization of the target stimulus to appropriate label on the top of the screen. Latencies included the time for correcting an error response in GL-IAT and P-IAT (built-in-error-penalty). At all phases, D built in error penalties score (D_biep) for each participant is calculated with the improved algorithm of Greenwald and colleagues (2003; Nosek, 2005; Lane et al., 2007):

a. The calculation of mean (latency) and "inclusive" standard deviations (latency) for each participant,
b. The removal of trials >10,000ms,
c. The calculation of mean latencies (for each Block 3, 4, 6 and 7) and latency mean differences ($Mean_{block6} - Mean_{block3}$), ($Mean_{block7} - Mean_{block4}$),
d. The calculation of "inclusive" standard deviations,
e. The calculation of D built in error penalties scores (D_biep_a and D_biep_b) by dividing each mean difference by the associated inclusive standard deviation,
f. Taking equal-weight averages of D built in error penalty scores to get D score for each participant.

Given that compatible responses are subtracted from incompatible responses, higher D scores indicate higher stereotypic/prejudicial associations. To correct for potential outliers of IAT, I deleted IAT scores of participants who have more than 10% of trials that have latencies <300ms and >30% of critical trials with errors (Greenwald et al., 2003; Nosek et al., 2007a). I only deleted one GL-IAT score at Phase 1; one GL-IAT and three P-IAT scores at Phase 2; four GL-IAT and two P-IAT scores at Phase 3 (11 scores in total).

To facilitate latent variable analysis on IAT, I further calculated D scores by parceling IAT data of each participant for each observation period. I create four parcels for each test following the procedures of past research (e.g., Cunningham et al., 2001; Nosek et al., 2005; Karpinski & Steinman, 2006; Nosek et al., 2007b; Schmukle & Egloff, 2006; Sriram &Greenwald, 2009). I combine two paired critical blocks (Block 3 & Block 4 and Block 6 & Block 7). Then I split the trials of combined compatible blocks and incompatible blocks into four parcels based on odd-even trial numbers. For example, for a 20-trial block, parcel 1 includes odd trial numbers 1, 5, 9, 13 and 17, whereas parcel 2 has even trial numbers 2, 6, 10, 14 and 18. Parcel 3 has remaining odd

trials 3, 7, 11, 15 and 19; and parcel 4 involves remaining even trials 4, 8, 12, 16 and 20. Note that this procedure is *random* in terms of stimuli (e.g., attributes) given that stimuli appear randomly across trials. Such a procedure serves to ensure comparability by creating equal number of trials of IATs among parcels. It also avoids any effects because of splitting data into earlier or later trails (Schmukle & Egloff, 2006). Then I calculate D score for each parcel separately. For GL-IAT, I obtain parcels g1, g2, g3, and g4; for P-IAT, the parcel scores are p1, p2, p3 and p4.

3.4.2. Descriptives, factor structures, reliability analyses and univariate analyses

Prior to any analyses, I explore the longitudinal data across sub-samples with an aim to detect any coding error and to test the normality assumption (Hair et al., 2010). The aim is to test whether variables are normally distributed across phases. I examine the frequency tables, the shape of distributions (e.g., skewness-kurtosis degrees, Kolmogorov-Smirnov tests) and graphical representations (e.g., histograms) for each variable at each data collection point. The visual inspection and statistical tests reveal approximation to normality for each self-report scale and IAT D scores across phases.

The perceived mayor characteristics - i.e., success/performance and mayor agency-communality – could be similar for a given mayor (within a given municipality) and could be differentiated across mayors (between municipalities). In order to increase the objectivity of mayor characteristics indicators, I explore whether I can aggregate scores at group level. I try to capture shared perception on mayor characteristics. Then, I center scores on group level means to reveal employees' individual level deviation from group level agreements (i.e., Hofmann & Gavin, 1998; Kozlowski & Klein, 2000) In order to explore whether there are significant and reliable between group level consistencies over the total scores of the indicators of mayor characteristics, I utilize the intra-class coefficients (Bliese, 2000; Kozlowski & Klein, 2000). I calculate ICC1 from the division of between-group variance by the total variance (within group variance + between group variance) (Bliese, 2000). I calculate ICC2 to estimate the reliability of the differences among the group means of municipalities. I aggregate the respondent ratings at group level based on both the significant ICC1 values and ICC2 values above

than .70 (Klein, Bliese, Kozlowski, Dansereau, Gavin, Griffin et al., 2000). Furthermore, in order to capture employees' individual level deviation from their group/municipality (i.e., Hofmann & Gavin, 1998; Kozlowski & Klein, 2000), I center perception scores for each participant at group (i.e., municipal) level by subtracting their score from group means (Group centered score = individual score – group mean).

To examine group differences in attrition analyses and descriptive statistics, I use one-way analysis of variance (ANOVA) for continuous dependent variables, and chi-squares for categorical variables. I examine zero order correlations for inter-relations among IAT scores and self-report scales.

3.4.3. Measurement invariance, structural invariance and alpha-beta-gamma (ABG) change

Prior to hypotheses testing, I test multi-group and longitudinal measurement invariance of repeated measures. Measurement invariance (MI) tests have been conducted in studies where researchers validate scales across diverse groups (e.g., across gender or experimental groups), or across measurement occasions (e.g., longitudinal MI). I test the measurement equivalence of IATs across exposure group versus control group as well as across gender groups at Phase 1. Longitudinal measurement invariance is a precondition to assess individual change trajectories (Chan, 1998; Vandenberg & Lance, 2000). The validity is partially verified by longitudinal measurement invariance (Ployhart & Vandenberg, 2010). Of current concern in longitudinal measurement invariance is whether respondents interpreted and evaluated implicit attitudes toward female leadership in the same way across time. I undertake longitudinal invariance tests for P-IAT (three-repeated measures), GL-IAT (two repeated measures) and ILT scale (two repeated measures).

To establish measurement invariance across time, a hierarchical series of nested CFA models with maximum likelihood (ML) estimation are fitted to the vector of 12 indicator means and variance-covariance matrix each for GL-IAT and P-IAT. As discussed previously in the current theoretical framework, measurement invariance test involves four basic models. One is *configural invariance*, which is whether same factors assess the target construct across phases. I specify a configural invariance model as a

baseline model. The null hypothesis of configural invariance tests is the equivalence of factor structures across measurement occasions. Three latent factors, all factor variances, covariances, means and residual covariances are estimated simultaneously and freely. For identification purposes, one observed indicator's loading is fixed to 1 and its intercept is fixed to 0 for each latent factor.

The second model is *metric invariance* (or, "weak" invariance) is concerned with the degree of loadings across repeated measures. Metric invariance model is nested in configural invariance model. I constrained all factor loadings to be equal across phases. For identification purpose, the factor variance is fixed to 1 for Phase 1 latent factor, but freely estimated for other latent factors. All intercepts and residuals are freely estimated.

The third model is *scalar invariance* (or, "strong invariance") which is about the equality of unstandardized indicator intercepts across phases. Scalar invariance model is nested in metric invariance model. All indicator intercepts are constrained equal across phases. Additionally, the factor mean of Phase 1 latent factor is fixed to 0 for identification purposes, but other factor means and residuals are freely estimated. The fourth one is the *residual invariance* ("strict" invariance) model, which tests the equality of the unstandardized residual variances across phases. It tests whether the amount of indicator variance not accounted by the latent factor is equal across phases. Residual invariance model is nested in scalar invariance model. I constrained all residual variances to be equal across phases.

Given the longitudinal and multiple group measurement invariance of repeated measures, I further examine the structural invariance of measures with three models. The first structural invariance model is the equality of factor variances. The invariance model of factor variance is nested on residual measurement invariance model. This time all latent factor variances are constrained to one. The second structural invariance model is the equality of factor covariances. It is nested in the factor variance model and tests the equality of factor covariances across time. I constrained all latent factor covariances to be equal. The final model is the equality of latent factor means and is nested in the factor covariance model. Latent factor means are constrained to be equal to each other.

CFA based measurement and structural invariance models are considered as the most valid means of capturing the presence of alpha-beta-gamma (ABG) change (see, Riordan et al., 2003; Vandenberg & Lance, 2000). In Golembiewski and colleagues'

(1976) seminal paper, alterations in factor structure are taken as an indication of beta and gamma change without clearly distinguishing between these two change types. More recent CFA based approaches (see, Chan, 1998; Riordan et al., 2003; Vandenberg & Lance, 2000) and empirical analyses (e.g., Epitropaki & Martin, 2004; Thompson & Hunt, 1996) have operationalized ABG change within measurement invariance (MI) and structural invariance (SI) framework. Here I follow such operationalization of ABG change types.

I operationalize g*amma change* in terms of the lack of configural invariance in MI and non-equivalence among factor covariances in SI. *Beta change* is defined as the recalibration of scaling units (i.e., the lack of metric invariance given configural invariance) and change in the value of item ratings shown in unequal item intercepts (i.e., the lack of scalar invariance given metric invariance). Given that residual invariance, the lack of equivalence of factor variances across time (i.e., the lack of factor variance SI) also indicates the presence of beta change. I, therefore, operationalize respondents' recalibration of responding to IATs stimuli as the absence of metric invariance, the lack of scalar invariance and non-equivalence of factorial variances across time. *Alpha change* is defined as the differences in factorial means across time given MI and other tests of structural invariance (i.e., factorial variance and covariance). The absence of factorial mean invariance across time may indicate the presence of mean level change in implicit attitudes toward female leadership in exposure group. I test ABG changes in nested hierarchical models of longitudinal and multi group (exposure group versus control group) MI and SI.

3.4.4. Latent growth modeling

After verifying the measurement invariance of repeated measures, I test my main hypothesis with Latent Growth Modeling within structural equation modelling framework. LGM is a highly recommended technique to analyze within person change trajectories given that it overcomes most limitations of other analyses such as repeated measure analysis of variance (ANOVA) and random coefficient models (such as hierarchical linear modeling, HLM) (Chan, 1998; Muthen & Curran, 1997). ANOVA

assumes the homogeneity and equality of residuals of repeated measurement, which is mostly unlikely because individual variability can exist in change patterns. Random coefficient models do not allow testing latent variables as predictors of change. To examine the rate of intra-individual change in generalized implicit prejudice toward female leadership, I analyze data with multiple indicator latent growth modelling (MLGM; Chan, 1998; Geiser, Keller & Lockhart, 2013; Muthen & Muthen, 1998-2012). MLGM extends latent growth by modelling target construct as latent variable (first-order) with multiple observed indicators on confirmatory factor model. I utilize MLGM (Chan, 1998; Geiser et al., 2013), because first it partials out random error from true change trajectory and time specific residual variability. Second, it allows the estimation of the longitudinal measurement invariance model while estimating growth trajectory.

In the current MLGM, four observed parcels of P-IAT represent each first order latent variable. First order latent variables function as indicators of two second-order latent factors – that is, growth parameters: intercept and slope (Chan, 1998). Intercept represents initial status of growth curve – i.e., means and variances of each individual's intercepts. Slope represents the rate of change – i.e., slope of each individual's growth curve. The latent variable slope serves to index participants' true change on implicit prejudice over repeated measurements. The means of intercept and slope represent the average starting point and the rate of change, respectively. The variance of intercept and the variance of slope represent the individual variability at the beginning and the extent of change.

Any significant variability of intercept and slope suggest that time invariant and/or time varying covariates can be entered to model to account for the variability among individuals in terms of starting point and the rate of change, respectively. In the current study, I estimate a series of MLGM models:

1) I, first, determine the unconditional MLGM of control group and exposure group, separately. Each measurement of P-IAT is represented as a latent indicator of two growth factors – intercept and slope. The loadings of latent variable intercept are fixed to 1 so that intercept serves to index participants' baseline levels - Phase 1 score of implicit prejudice toward female leadership (Chan, 1998). The loadings of slope are fixed to 0 for the phase 1 measurement, 1 to phase 2 measurement and 2

for phase 3. Constraints on loadings of slope are evenly spaced, because time intervals are equal (three-month interval). These weights are positive given that the basic expectation is a linear trend (especially for only three observation time points).

2) I test multiple group unconditional MLGM to test the difference between exposure group and control group.
3) Then, I determine the functional form of growth trajectory of P-IAT. I examine whether the change function follows a linear pattern or alternative ("optimal") estimation (such as curvilinearity). To test the linearity, the change (slope) factor loadings are constrained to 0, 1 and 2 across repeated measures. To test the optimal estimation, I constrain the first and second change factor loadings to 0 and 1 respectively, but allow the free estimation of the third loading.
4) I augment MLGM model with demographic variables such as gender and hypothesized predictors of change in P-IAT – namely a) implicit stereotyping, b) ILT, c) perceived agency-communality of mayor, d) perceived success of mayor, e) perceived quantity and quality (i.e., LMX, IJ) of relationship with mayor, f) gender identity and gender of participants.
5) Finally, I specify mediational models to test whether a) implicit stereotyping and b) the sensitive content of leadership prototypes mediated the relationship between exposure to female leadership and the slope factor of P-IAT. The models concerning with the mediating effect of the sensitivity content of leadership prototypes are developed on multiple group MLGM. They exemplify conditional indirect effect (Preacher, 2010) or the moderated mediation models. Multiple-group MLGM calculates the mediating effects separately for the grouping variable – exposure group versus control group

For all MLGM analysis, I utilize maximum likelihood (ML) estimation given the linear distribution of P-IATs D scores for each time point. As mentioned before, factor loadings of intercept latent factors are fixed to one. The covariation between latent intercept and slope is freely estimated in order to reveal whether the starting implicit prejudice levels predict the change trajectory. I specify listwise deletion missing data procedure in all analyses as discussed before.

3.4.5. Model fit assessment for latent variable analyses

For all latent variable analyses in Mplus, I utilize standard indices to assess model fit with the aim of minimizing Type 1 and Type 2 errors (Bentler, 1990; Chen, 2007; Cheung & Rensvold, 2002; Vandenberg & Lance, 2000). I use the following fit indices to detect model misspecifications in all latent analyses and model comparisons in nested models: a) chi-square (X^2) goodness of fit test, b) the Comparative Fit Index (CFI), c) Tucker-Lewis Index (TLI), and d) the root mean square error of approximation (RMSEA).

Any small difference among factor patterns of groups and larger sample size increases the probability of finding the chi square level as significant. Researchers, therefore, recommend supplementing chi-square with other indices, such as CFI, NFI, TLI and RMSEA (Chen, 2007; Cheung & Rensvold, 2002; Vandenberg & Lance, 2000). Values .90 or above are accepted to indicate satisfactory fit, whereas values .95 or above indicate a good fit for CFI and TLI values. The absolute value of RMSEA is generally useful to observe misspecified models and especially to inspect misfit loadings of latent factors in measurement invariance models. As a rule of thumb, RMSEA value .08 (or even .10) is regarded as a satisfactory fit, and value .05 or below indicate a good fit (Vandenberg & Lance, 2000). To compare nested models, I compute the likelihood ratio test by scaling chi square difference for degrees of freedom (ΔX^2 /Δdf). I use the chi square difference tests to compare differences in fit indices of models.

4.

RESULTS

This section presents the current findings. It begins with descriptive statistics, factor analysis and reliability estimates of measures. Then it reports the results on univariate analyses, longitudinal measurement invariance tests and tests on change in implicit attitudes toward female leadership.

4.1.Descriptives and Reliability of IATs

Table 4.1 presents descriptive statistics including means, standard deviations, internal consistencies and zero order correlations indicating test-retest reliabilities of IAT D scores.

Table 4.1.
Means, Standard Deviations, Cronbach Alpha Coefficients and Zero Order Correlations Indicating Test-Retest Reliability of GL-IAT and P-IAT D scores

	Mean (SD)		Cronbach Alpha		Correlations in Control Group				
	Exposure	Control	Exposure	Control	2	3	4	5	6
1.GL-IAT PH1	.06 (.31)	.09 (.32)	.81	.78	.18	.14	-.06	-.14	-.09
2.GL-IAT PH2	.03 (.31)	.14 (.31)	.78	.72	-	.20*	-.04	-.13	-.09
3.GL-IAT PH3	.01 (.27)	.10 (.27)	.74	.68		-	-.17	-.10	-.17
4.P-IAT PH1	-.15 (.52)	-.18 (.52)	.92	.93			-	.46**	.35**
5.P-IAT PH2	-.15 (.52)	-.16 (.49)	.89	.90				-	.39**
6.P-IAT PH3	-.18 (.45)	-.17 (.47)	.88	.89					-

*p< .05. p < .01. Correlations N = 122. *Note.* GL-IAT: Gender Leadership Implicit Association Test; P-IAT: Prejudice Implicit Association Test; Ph1: Phase 1; Ph2: Phase 2; Ph3: Phase 3.

In the exposure group, Cronbach alpha coefficients ranged from .74 to .81 for GL-IAT and ranged from .88 to .92 for P-IAT across phases. In the control group, Cronbach alpha coefficients ranged from .68 to .78 for GL-IAT and ranged from .89 to .93 for P-IAT across phases. These ranges are above the .60 threshold for the reliability of implicit measures as a rule of thumb (Lane et al., 2007; Nosek et al., 2007a) and therefore supported an acceptable level of internal consistency of GL-IAT and P-IAT for each group.

I examine test-retest reliability of IATs for only the control group where change in scores is not predicted. In the control group, zero order correlations of P-IAT repeated measures indicate acceptable level of test-retest reliability, $r_{PIATPh1\text{-}Ph2} = .46$, $p < .01$ and $r_{PIATPh2\text{-}Ph3} = .39$, $p < .01$. The correlations among repeated scores of GL-IAT in the control group are $r_{GLIATPh1\text{-}Ph2} = .18$, n.s., $r_{GLIATPh2\text{-}Ph3} = .20$, $p < .05$ and $r_{GLIATPh1\text{-}Ph3} = .14$, n.s. Except correlations between Phase 2 and Phase 3 scores, test-retest reliabilities are lower than the acceptable range of .20 to .69 as reported in previous research (e.g., Cunningham et al., 2001; Egloff et al., 2005; Lane et al., 2007). Hence, GL-IAT may not be a reliable measure of implicit stereotype toward female leadership, which might threaten the validity of inferences on the change of implicit stereotyping toward female leadership. I examine this threat in the measurement invariance models of GL-IAT and I am cautious in interpreting all statistical analyses involving GL-IAT.

The means of GL-IAT D scores are positive (Greenwald et al., 1998) across group and across time, indicating implicit stereotypic view of female leadership. The means of all P-IAT D scores are negative, indicating that participants of the exposure group and the control group tend not to have implicit prejudicial attitudes against female leadership. Moreover, as shown on Table 4.1, D scores of GL-IAT and P-IAT negatively correlate in the control group. Although they do not reach a significant level, negative correlations implied the divergence of measurements on implicit stereotyping and implicit prejudice. I check the divergence of their measurements - discriminant validity of GL-IAT and P-IAT - by comparing one second-order latent factor versus two first order factors in CFA models tested on the control group at Phase 1 D scores. Table 4.2 shows the unstandardized estimates (standard errors) and standardized estimates of the 2-factor model.

Table 4.2.
Unstandardized Estimates (Standard Errors) and Standardized Estimates of GL-IAT and P-IAT for the Control Group at Phase-1

		Unstandardized estimates (Standard error)	Standardized estimates
GL-IAT			
	g11	1.000 (.000)	.744
	g12	.845 (.105)	.744
	g13	.964 (.126)	.695
	g14	.890 (.114)	.713
P-IAT			
	p11	1.000 (.000)	.832
	p12	1.297 (.094)	.888
	p13	1.122 (.082)	.886
	p14	1.176 (.091)	.851

Note. N = 170. Parcels g11 to g14 represented GL-IAT Phase 1. Parcels p11 to p14 represented P-IAT Phase 1. All estimates are significant at $p < .001$. The correlation between GL-IAT and P-IAT = -.06, n.s.

The results show the superiority of the non-covariation among the two first order factor model, $\Delta\chi^2 = 278.695$, $\Delta df = 2$, $p < .001$, over the one latent factor model, χ^2 (21) = 315.761, $p < .001$, CFI = .57, TLI = .42, RMSEA (90% CI) = .30 (.27-.33). The 2-factor model, χ^2 (19) = 37.066, $p = .008$, CFI = .97, TLI = .96, RMSEA (90% CI) = .08 (.04-.12), supports the measurement level differentiation of IATs (Blair et al., 2010).

4.2.Univariate Analyses

Table 4.3a and Table 4.3b present means, standard deviations, Cronbach alpha coefficients and correlations in the exposure group and the control group, respectively. GL-IAT D scores (Phase 2) have significant positive correlations with performance indicators (ranging from .31 to .40) in the exposure group. The exposure group's PIAT D scores (Phase 1) have significant positive correlations with the dynamic ILT (Phase 3), r = .28, p < .05. The exposure group's P-IAT D scores at Phase 3 have significant negative correlations with the scores of quantity of interaction with the female leader (overall, $r = -.34$, $p < .05$; distant interaction, $r = -.33$, $p < .05$, and close interaction, $r = -.29$, $p < .05$). These scores have also significantly negative correlations with the quality of interaction with the female leader (overall, $r = -.31$, $p < .05$, the affective exchange, $r = -.33$, $p < .05$, and professional exchange, $r = -.31$, $p < .05$).

I further examined group level comparisons by conducting univariate analysis of variance (ANOVA) on employee characteristics. As shown on Table 4.4a, one way ANOVAs indicated no group difference on IATs among exposure to female leadership (the exposure group versus the control group), participants' age, or education groups. Similarly, there was no group difference on IATs among groups of prior experience with women managers (yes, no), as well as municipality characteristics (i.e., municipality size, % of female council members, % of representativeness of mayor's party in the council)[8]. I found significant group differences on respondents' gender and tenure in terms of Phase 1 IATs. Men (M = .12, SD = .49) had higher implicit prejudice at Phase 1 compared to women (M = -.44, SD = .39), F (1, 216) = 111.14, p < .001, η^2 = .29. In contrast, men (M = .01, SD = .31) had lower implicit stereotyping at Phase 1 compared to women (M = .13, SD = .31), F (1, 216) = 10.68, p < .01, η^2 = .04. Municipality tenure was related to higher implicit stereotyping at Phase 1, F (2, 216) = 3.62, p < .05, η^2 = .03. Fisher's LSD post hoc analyses on municipal tenure showed that employees who are tenured less than 5 years (M = .02, SD = .30) had significantly lower implicit stereotyping than those tenured more than 15 years (M = .15, SD = .32). Sectoral tenure groups significantly differed in terms of implicit stereotyping, F (2, 216) = 3.04, p < .05, η^2 = .03, and implicit prejudice, F (2, 216) = 3.47, p < .05, η^2 = .03. Fisher's LSD post hoc analyses on sectoral tenure showed that employees who are tenured less than 5 years (M = .02, SD = .29) had significantly lower implicit stereotyping than those tenured more than 15 years (M = .13, SD = .33). Fisher's LSD post hoc analyses on sectoral tenure showed that employees who are tenured less than 5 years (M = -.17, SD = .56) had lower implicit prejudice toward female leadership compared to others. Considering these significant results, I explore participant gender and tenure in trajectory analyses on GL-IAT and P-IAT. I dichotomize tenure variables as 1 (high tenure; 5 years or higher) and 0 (low tenure; lower than 5 years) in subsequent analyses[9].

[8] Phase 1 scores of IATs did not differ between the original sample and newly added participants, suggesting similar levels of implicit stereotyping and implicit prejudice toward female leadership of these participants (see, Table 4.18a). Two sample groups, similarly, did not differ in terms of GL-IAT Phase 2 [F (1, 235) = .218, *n.s.*], GL-IAT Phase 3 [F (1, 206) = 2.87, *n.s.*], P-IAT Phase 2 [F (1, 235) = 2.42, *n.s.*] and P-IAT Phase 3 [F (1, 208) = .005, *n.s.*]. These findings indicated that new participants did not differ from the original sample in terms of implicit stereotyping and implicit prejudice toward female leadership. Therefore, I merged two samples in further analyses.

[9] I dichotomize the tenure because multiple-group MLGM did not converge with eight groups.

Table 4.3a.

Means, Standard Deviations, Cronbach Alpha Coefficients and Zero Order Pearson Correlations among Variables for the Exposure Group

Exposure group	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1.GL-IAT PH1	.06	.31	(.81)	.15	.05	-.27**	-.14	-.22*	-.07	-.13	.01	-.15	-.17	-.14	-.19
2.GL-IAT PH2	.03	.31		(.78)	.18	-.02	-.05	-.07	.15	.20	.08	.14	.16	.18	.07
3.GL-IAT PH3	.01	.27			(.74)	.02	-.19	-.06	-.05	-.04	-.08	-.06	-.04	-.16	-.04
4.P-IAT PH1	-.15	.52				(.92)	.31**	.30**	.03	.05	.01	.15	.07	.12	.23
5.P-IAT PH2	-.15	.52					(.89)	.40**	.11	.13	.13	-.09	-.10	-.11	.02
6.P-IAT PH3	-.18	.45						(.88)	-.34*	-.33*	-.29*	-.31*	-.33*	-.31*	-.18
7.Quantity	1.62	1.90							(.94)	.95**	.94**	.51**	.54**	.41**	.47**
8.Quantity – distant	2.45	2.16								(.93)	.78**	.56**	.59**	.45**	.54**
9.Quantity-close	.86	1.89									(.95)	.40**	.43**	.34*	.35*
10.Quality	3.02	.91										(.97)	.94**	.93**	.90**
11.Quality-LMX affect	3.02	.91											(.93)	.83**	.79**
12.Quality – LMX prof.	2.93	1.08												(.93)	.73**
13.Quality - IJ	3.16	.96													(.96)

Note. *GL-IAT:* D score for Gender-Leadership Implicit Association Test; *P-IAT:* D score for Prejudice Implicit Association Test; *Quantity:* Score of frequency of interaction with the leader at Phase 2; *Quantity-distant:* Score of frequency of distant interaction with the leader at Phase 2; *Quantity-close:* Score of frequency of close interaction with the leader at Phase 2; *Quality:* Composite score of Leader-Member Exchange Multidimensional scale and interactional justice scale at Phase 2; Quality-LMX affect: affect sub-dimension of Leader-Member Exchange Multidimensional scale at Phase 2; Quality-LMX professional respect: professional respect sub-dimension of Leader-Member Exchange Multidimensional scale at Phase 2; Quality-IJ: score of interactional justice scale at Phase 2;

Exposure group	M	SD	14	15	16	17	18	19	20	21	22	23	24	25
1.GL-IAT PH1	.06	.31	-.05	-.05	-.06	-.04	.01	-.10	-.23	-.01	-.13	-.17	-.08	-.06
2.GL-IAT PH2	.03	.31	.37*	.36*	.40**	.31*	.14	.16	-.01	-.04	.08	.14	.08	.01
3.GL-IAT PH3	.01	.27	.11	.14	.15	.01	-.07	-.02	-.18	-.01	.01	-.04	.13	-.19
4.P-IAT PH1	-.15	.52	.06	.01	.08	.08	.03	.08	.17	.28*	.15	.18	-.05	-.16
5.P-IAT PH2	-.15	.52	-.11	-.08	-.06	-.14	-.03	-.14	-.07	-.12	-.08	-.14	-.17	-.11
6.P-IAT PH3	-.18	.45	-.22	-.14	-.21	-.29	-.061	-.18	-.07	-.09	-.18	-.27	-.14	.03
7.Quantity	1.62	1.90	.53**	.40**	.51**	.61**	.43**	.32*	.38*	.32*	.56**	.48**	.39**	.25
8.Quantity – distant	2.45	2.16	.60**	.49**	.57**	.65**	.48**	.37*	.43**	.33*	.64**	.53**	.44**	.26
9.Quantity-close	.86	1.89	.42**	.27	.41**	.50**	.33*	.24	.28	.28	.39*	.37*	.32*	.24
10.Quality	3.02	.91	.84**	.76**	.77**	.87**	.36*	.27	.62**	.55**	.86**	.72**	.48**	.36*
11.Quality-LMX affect	3.02	.91	.78**	.73**	.69**	.81**	.37*	.35*	.60**	.51**	.80**	.67**	.59**	.44**
12.Quality – LMX prof.	2.93	1.08	.78**	.72**	.70**	.79**	.28	.27	.52**	.47**	.71**	.77**	.40**	.44**
13.Quality - IJ	3.16	.96	.75**	.65**	.72**	.77**	.40*	.17	.63**	.50**	.84**	.51**	.36*	.13
14.Performance -overall	7.02	2.31	(.94	.95**	.95**	.96**	.44**	.35*	.43**	.42**	.79**	.66**	.47**	.31*
15.Performance - strategy	7.05	2.42		(.95)	.85**	.86**	.42**	.37*	.31*	.30	.77**	.63**	.44**	.30*
16.Performance -public affairs	7.13	2.31			(.92)	.87**	.38*	.21	.39**	.42**	.70**	.64**	.33*	.19
17.Performance -internal affair	6.83	2.50				(.94)	.46**	.41**	.53**	.48**	.79**	.63**	.53**	.36*
18.ILTsensitivity PH 1	6.20	1.08					(.96)	.65**	.20	.09	.53**	.27	.39**	.28**
19.ILT-dynamism PH 1	6.27	.94						(.96)	.33*	.29*	.38*	.44**	.38**	.31**
20.ILT sensitivity PH3	6.19	1.02							(.96)	.71**	.70**	.47**	.23	.24
21.ILT-dynamic PH 3	6.19	.86								(.94)	.48**	.47**	.08	.14
22.Mayor	5.82	1.14									(.98)	.68**	.52**	.15

communality

Exposure group	M	SD	14	15	16	17	18	19	20	21	22	23	24	25
23.Mayor agency	5.88	1.13										(.95)	.40*	.29
24.Participant femininity	6.31	.58											(.83)	.42**
25.Participant masculinity	5.72	.96												(.84)

Note. *GL-IAT:* D score for Gender-Leadership Implicit Association Test; *P-IAT:* D score for Prejudice Implicit Association Test; *Quantity:* Score of frequency of interaction with the leader at Phase 2; *Quantity-distant:* Score of frequency of distant interaction with the leader at Phase 2; *Quantity-close:* Score of frequency of close interaction with the leader at Phase 2; *Quality:* Composite score of Leader-Member Exchange Multidimensional scale and interactional justice scale at Phase 2; Quality-LMX affect: affect sub-dimension of Leader-Member Exchange Multidimensional scale at Phase 2; Quality-LMX professional respect: professional respect sub-dimension of Leader-Member Exchange Multidimensional scale at Phase 2; Quality-IJ: score of interactional justice scale at Phase 2; *performance-overall*: Score of municipality organizational performance scale at Phase 2; *Performance-strategy:* Score of strategy sub-dimension of municipality organizational performance scale at Phase 2; *Performance-public affairs:* Score of public affairs sub-dimension of municipality organizational performance scale at Phase 2; *Performance-internal affairs:* Score of internal affairs sub-dimension of municipality organizational performance scale at Phase 2; *ILT sensitivity PH1*: Sensitivity sub-scale score of Implicit Leadership Theories scale at Phase 1*; ILT dynamism PH1*: Dynamism sub-scale score of Implicit Leadership Theories at Phase 1; *ILT sensitivity PH3*: Sensitivity sub-scale score of Implicit Leadership Theories scale at Phase 3*; ILT dynamism PH3*: Dynamism sub-scale score of Implicit Leadership Theories at Phase 3; *Mayor communality*: Communality sub-scale of Mayor Agency-Communality Scale at Phase 2; *Mayor agency*: agency sub-scale of Mayor Agency-Communality Scale at Phase 2; *Participant Masculinity*: Masculine sub-scale score of Bem Sex Role Inventory; *Participant Femininity*: Feminine sub-scale score of Bem Sex Role Inventory.

Table 4.3b.

Means, Standard Deviations, Cronbach Alpha Coefficients and Zero Order Pearson Correlations for the Control Group

Control group	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1.GL-IAT PH1	.09	.32	(.78)	.18	.14	-.06	.14	-.09	-.17	-.21	-.09	-.02	.01	.01	-.05
2.GL-IAT PH2	.14	.31		(.72)	.20*	-.04	-.13	-.09	.14	.15	.09	-.06	-.05	-.05	-.08
3.GL-IAT PH3	.10	.27			(.68)	-.17	-.10	-.17	-.08	-.01	-.16	-.03	-.03	-.13	.05
4.P-IAT PH1	-.18	.52				(.93)	.46**	.35**	.11	.12	.09	.05	-.04	.07	.01
5.P-IAT PH2	-.16	.49					(.90)	.39**	.10	.11	.07	.18	.15	.13	.13
6.P-IAT PH3	-.17	.47						(.89)	-.05	.03	-.12	.01	.01	.02	-.03
7.Quantity	1.42	1.55							(.93)	.94**	.89**	.41**	.35**	.38**	.40**
8.Quantity –distant	2.21	1.97								(.92)	.70**	.46**	.38**	.45**	.44**
9.Quantity-close	.67	1.42									(.93)	.26*	.24	.23	.28*
10.Quality	2.32	1.14										(.95)	.96**	.91**	.94**
11.Quality-LMX affect	2.33	1.15											(.95)	.80**	.89**
12.Quality – LMX prof.	2.50	1.20												(.95)	.74**
13.Quality - IJ	2.18	1.26													(.96)

Note. *GL-IAT:* D score for Gender-Leadership Implicit Association Test; *P-IAT:* D score for Prejudice Implicit Association Test; *Quantity:* Score of frequency of interaction with the leader at Phase 2; *Quantity-distant:* Score of frequency of distant interaction with the leader at Phase 2; *Quantity-close:* Score of frequency of close interaction with the leader at Phase 2; *Quality:* Composite score of Leader-Member Exchange Multidimensional scale and interactional justice scale at Phase 2; Quality-LMX affect: affect sub-dimension of Leader-Member Exchange Multidimensional scale at Phase 2; Quality-LMX professional respect: professional respect sub-dimension of Leader-Member Exchange Multidimensional scale at Phase 2; Quality-IJ: score of interactional justice scale at Phase 2.

Control group	M	SD	14	15	16	17	18	19	20	21	22	23	24	25
1.GL-IAT PH1	.09	.32	.02	.09	.04	-.01	-.05	.03	-.22	-.04	.05	-.01	-.02	-.02
2.GL-IAT PH2	.14	.31	-.11	-.10	-.10	-.11	-.02	-.15	-.11	-.07	-.21	-.14	.10	-.12
3.GL-IAT PH3	.10	.27	-.09	-.07	-.10	-.08	.06	-.02	-.18	-.20	-.06	-.09	.07	.02
4.P-IAT PH1	-.18	.52	.11	.11	.08	.17	-.01	-.10	.09	.12	.04	.02	-.02	.15
5.P-IAT PH2	-.16	.49	.10	.14	.05	.09	-.10	-.14	-.01	.04	.15	.18	-.16	.17
6.P-IAT PH3	-.17	.47	.05	.13	.01	.05	-.10	-.09	-.04	.04	.11	.10	-.08	.07
7.Quantity	1.42	1.55	.47**	.45**	.45**	.44**	.14	.09	.26	.20	.37**	.25	.08	.05
8.Quantity –distant	2.21	1.97	.49**	.46**	.46**	.47**	.12	.06	.25	.21	.37**	.25	.14	.13
9.Quantity-close	.67	1.42	.39**	.35**	.38**	.35**	.11	.11	.21	.13	.28*	.19	-.02	-.07
10.Quality	2.32	1.14	.80**	.67**	.75**	.75**	.21	.18	.31*	.42**	.82**	.72**	.09	.14
11.Quality-LMX affect	2.33	1.15	.74**	.65**	.68**	.67**	.19	.10	.33*	.40**	.79**	.67**	.09	.19
12.Quality – LMX prof.	2.50	1.20	.71**	.62**	.70**	.65**	.27*	.28*	.25	.46**	.71**	.70**	.06	.17
13.Quality - IJ	2.18	1.26	.76**	.60**	.67**	.79**	.18	.15	.29*	.30*	.80**	.66**	.12	.08
14.Performance-overall	6.52	1.98	(.92)	.92**	.94**	.91**	.22	.29*	.22	.40**	.75**	.73**	.16	.12
15.Performance- strategy	6.52	2.23		(.94)	.84**	.82**	.16	.18	.24	.34**	.60**	.69**	.10	.14
16.Performance-public affairs	7.20	1.90			(.91)	.80**	.28*	.33**	.13	.28*	.69**	.67**	.20	.13
17.Performance-internal affair	5.90	2.30				(.92)	.17	.24*	.22	.36**	.76**	.63**	.16	.06
18.ILTsensitivity PH 1	5.80	1.43					(.95)	.72**	-.04	-.03	.17	.19	.38**	.16
19.ILT-dynamism PH 1	6.11	1.11						(.97)	-.19	.06	.26*	.33**	.47**	.27**
20.ILT sensitivity PH3	5.82	1.36							(.98)	.69**	.36**	.28*	-.16	.03
21.ILT-dynamic PH 3	5.98	1.09								(.94)	.37*	.43**	-.12	.15
22.Mayor communality	4.40	1.91									(.98)	.70**	.09	.17
23.Mayor agency	5.54	1.69										(.94)	.13	.24

Control group	M	SD	14	15	16	17	18	19	20	21	22	23	24	25
24.Participant femininity	6.01	1.01											(.84)	.32**
25.Participant masculinity	5.47	1.17												(.85)

Note. *GL-IAT:* D score for Gender-Leadership Implicit Association Test; *P-IAT:* D score for Prejudice Implicit Association Test; *Quantity:* Score of frequency of interaction with the leader at Phase 2; *Quantity-distant:* Score of frequency of distant interaction with the leader at Phase 2; *Quantity-close:* Score of frequency of close interaction with the leader at Phase 2; *Quality:* Composite score of Leader-Member Exchange Multidimensional scale and interactional justice scale at Phase 2; Quality-LMX affect: affect sub-dimension of Leader-Member Exchange Multidimensional scale at Phase 2; Quality-LMX professional respect: professional respect sub-dimension of Leader-Member Exchange Multidimensional scale at Phase 2; Quality-IJ: score of interactional justice scale at Phase 2; *performance-overall*: Score of municipality organizational performance scale at Phase 2; *Performance-strategy:* Score of strategy sub-dimension of municipality organizational performance scale at Phase 2; *Performance-public affairs:* Score of public affairs sub-dimension of municipality organizational performance scale at Phase 2; *Performance-internal affairs:* Score of internal affairs sub-dimension of municipality organizational performance scale at Phase 2; *ILT sensitivity PH1*: Sensitivity sub-scale score of Implicit Leadership Theories scale at Phase 1*; ILT dynamism PH1*: Dynamism sub-scale score of Implicit Leadership Theories at Phase 1; *ILT sensitivity PH3*: Sensitivity sub-scale score of Implicit Leadership Theories scale at Phase 3*; ILT dynamism PH3*: Dynamism sub-scale score of Implicit Leadership Theories at Phase 3; *Mayor communality*: Communality sub-scale of Mayor Agency-Communality Scale at Phase 2; *Mayor agency*: agency sub-scale of Mayor Agency-Communality Scale at Phase 2; *Participant Masculinity*: Masculine sub-scale score of Bem Sex Role Inventory; *Participant Femininity*: Feminine sub-scale score of Bem Sex Role Inventory.

Table 4.4.
One Way ANOVA on Group Comparisons for GL-IAT and P-IAT D scores at Phase 1

		GL-IAT					P-IAT				
Participant characteristics		Mean (SD)	*df*	*MS*	*F*	η^2	Mean (SD)	*df*	*MS*	*F*	η^2
Exposure vs. control	Control group (n = 174)	.09 (.32)	1	.06	.62	.002	-.18 (.52)	1	.05	.18	.001
	Exposure group (n = 133)	.06 (.31)					-.15 (.52)				
Gender	Female (n = 144)	.13 (.31)	1	1.03	10.68**	.039	-.44 (.39)	1	21.63	111.14***	.286
	Male (n = 139)	.01 (.31)					.12 (.49)				
Age (years)	30 > (n = 75)	.05 (.25)	2	.05	.47	.004	-.17 (.51)	2	.81	1.08	.024
	30-35 (n = 74)	.08 (.31)					-.07 (.55)				
	36 and < (n = 113)	.10 (.34)					-.16 (.48)				
Education	High school and > (n = 84)	.09 (.31)	2	.02	.16	.001	-.19 (.53)	2	.45	1.70	.013
	Vocational college (n = 58)	.08 (.33)					-.06(.53)				
	Bachelor/master (n = 116)	.07 (.31)					-.21 (.50)				
Municipality tenure	5 years > (n = 97)	.02 (.30)	2	.35	3.62*	.031	-.19 (.56)	2	.48	1.79	.015
	5-15 years (n = 91)	.10 (.31)					-.09 (.50)				
	15 years < (n = 56)	.15 (.32)					-.25 (.49)				
Sectoral tenure	5 years > (n = 86)	.02 (.29)	2	.29	3.04*	.026	-.17 (.56)	2	.93	3.47*	.028
	5-15 years (n = 86)	.11 (.31)					-.07 (.49)				
	15 years < (n = 75)	.13 (.33)					-.09 (.50)				
Prior exposure to women managers	Yes (n = 69)	.06 (.31)	1	.01	.11	.001	-.16 (.52)	1	.02	.09	.001
	No (n = 236)	.08 (.31)					-.19 (.51)				
Participant samples	Original sample (n = 253)	.08 (.32)	1	.01	.01	.001	-.15 (.52)	1	.48	1.75	.019
	Additional sample (n = 54)	.08 (.26)					-.25 (.55)				

Municipality characteristics		Mean (SD)	*df*	*MS*	*F*	η^2	Mean (SD)	*df*	*MS*	*F*	η^2
% of female citizens	< 50 % (n =185)	.09 (.31)	1	.05	.48	.002	-.21 (.50)	1	.80	2.94	.010
in district	>50% (n = 118)	.06 (.32)					-.10 (.55)				
% of female council	<15 % (n = 112)	.02 (.31)	1	.45	1.46	.006	-.16 (.53)	1	.01	.04	.001
members	>15% (n = 191)	.06 (.33)					-.17 (.52)				
% of council members of mayor's affiliated party	< 50 % (n = 153)	.06 (.32)	1	.13	1.34	.005	-.22 (.55)	1	.74	2.72	.009
	>50% (n = 150)	.10 (.31)					-.12 (.50)				

*p<.05. **p<.01. ***p <.001.

Note. For GL-IAT: Fisher's LSD post hoc analyses for sectoral tenure showed significant difference between those with less than 5 years and those with more than 15 years ($p < .05$). For municipal tenure, there was significant difference between less than 5 years and more than 15 years ($p < .05$). For P-IAT: Fisher's LSD post hoc analyses age, there was significant difference between participants of 30-35 years and those of 36 and more years ($p < .05$). For sectoral tenure, there was significant difference between those with more than 15 years and those with 5-15 year ($p < .05$).

4.2.1. Hypothesis testing on the group differences of GL-IAT

Hypotheses on group differences on GL-IAT state that employees who are exposed to a female municipality mayor (exposure group) would have lower levels of context dependent implicit stereotypic attitudes toward female leadership relative to the control group at Phase 1 (Hypothesis 1a) and at Phase 2 controlling for Phase 1 measure (Hypothesis 1b). As stated before and shown at Table 4.4, one-way ANOVA indicates no significant difference on GL-IAT across the exposure group and the control group at Phase 1. This refutes Hypothesis 1a.

To test Hypothesis 1b, considering the univariate analyses, I conduct a 2 X 2 ANCOVA to assess the main effect of exposure to female leadership on GL-IAT Phase 2 score as well as its interaction with participant gender. As shown at Table 4.5, 2 X 2 ANCOVA shows that controlling for GL-IAT Phase 1 measure, exposure to female leadership does not have significant main effect on GL-IAT Phase 2 scores controlling for Phase 1 score, F (1, 216) = 1.66, *n.s*. This also refutes Hypothesis 1b: the exposure group (M = .03, SD = .31)[10] do not have significantly lower levels of GL-IAT (at Phase 2) compared to the control group (M = .15, SD = .31), controlling for Phase 1 D score of GL-IAT.

Table 4.5.
2 X 2 ANCOVA Results with GL-IAT Phase 2 D Scores as the Dependent Variable

Variables	*df*	*MS*	*F*	η^2
GL-IAT Ph1	1	10.601	219.413**	.504
Exposure to the female mayor	1	.080	1.655	.008
Participant Gender	1	.291	6.030*	.027
Exposure * Participant Gender	1	.057	1.184	.005
Error	216	.048		

*p < .05. *Note*. GL-IAT Phase-2 as DV: R^2 = .53, *Adj* R^2 = .52, adjustments based on GL-IAT Phase 1 mean =1.07. Homogeneity of error variance was tested and not significant, F (3, 217) = 1.09, *n.s*.

Furthermore, female participants (M = .12, SD = .28) have higher D score for GL-IAT Phase 2 than male participants (M = .05, SD = .34), F (1, 216) = 6.03, p < .05, η^2 = .03. However, the interaction of gender and exposure to female leadership is not

[10] Means in the parentheses are estimated means.

statistically significant, F (1, 216) = 1.184, *n.s*. I also explore the interaction between the sectoral tenure and the exposure to the female mayor, but the analysis reveals no significant main effects or interaction effects.

In sum, these findings indicate that in contrast to Hypothesis 1a, participants in the exposure group and those in the control group do not have significantly different levels of implicit stereotyping at Phase 1. Albeit the first hypothesis is refuted, this finding indicate that the level of implicit stereotyping of two groups do not differ at the beginning of data collection. Furthermore, in contrast to Hypothesis 1b, controlling for Phase 1 measure, two groups do not differ in terms of implicit stereotyping at Phase 2, implying the lack of change in implicit stereotyping.

4.3.Measurement Invariance of Phase 1 D Scores of GL-IAT and P-IAT

Prior to tests on ABG change within measurement invariance (MI) and structural invariance (SI) framework, I specify several MI models: 1) MI of Phase 1 scores of GL-IAT and P-IAT scores across gender groups and the exposure group versus the control group.

Table 4.6a presents nested models on multiple-group MI tests of GL-IAT at Phase 1. I examine the configural invariance of GL-IAT in CFA models. Baseline models have satisfactory levels of fit indices supporting GL-IAT's configural invariance across the exposure group versus the control group, χ^2= 8.640, *df* = 4, *p* = .071, CFI = .99, TLI= .96, RMSEA (90% CI) = .09 (.00-.18). Results similarly suggest configural invariance of GL-IAT across respondent gender groups, χ^2= 3.200, *df* = 4, *p* = .525, CFI = 1.00, TLI= 1.01, RMSEA (90% CI) = .00 (.00-.12) (Cheung & Rensvold, 2002).

Given the configural invariance, I proceed to test the metric invariance model (nested in configural invariance), scalar invariance model (nested in metric invariance) and residual invariance model (nested in scalar invariance). The likelihood ratio comparison tests indicate non-significant change in chi-square tests of metric invariance for the exposure versus the control group, $\Delta\chi^2$ (3) = 1.532 *n.s.*, as well as for gender group, $\Delta\chi^2$ (3) = 2.526 *n.s*. These findings support the metric invariance

("weak invariance") of GL-IAT across exposure versus control groups and across gender groups.

Table 4.6a.
Multiple-Group Measurement Invariance Tests of GL-IAT at Phase 1 across Groups

Model	χ^2	*df*	p	$\Delta\chi^2$	Δdf	CFI	TLI	RMSEA (90% CI)
Respondent gender								
Configural	3.200	4	.525	-	-	1.00	1.01	.00 (.00-.12)
Metric	5.726	7	.572	2.526	3	1.00	1.01	.00 (.00-.10)
Scalar	8.513	10	.579	2.787	3	1.00	1.01	.00 (.00-.08)
Residual	12.541	14	.527	4.028	4	1.00	1.00	.00 (.00-.08)
Exposure vs. control								
Configural	8.640	4	.071	-	-	.99	.96	.09 (.00-.18)
Metric	10.172	7	.179	1.532	3	.99	.98	.06 (.00-.13)
Scalar	12.844	10	.232	2.672	3	.99	.99	.05 (.00-.11)
Residual	14.492	14	.414	1.648	4	.100	1.00	.02 (.00-.08)

Note. All loadings are statistically significant for each model.

The likelihood ratio comparison, similarly, indicate non-significant change in chi-square test on scalar invariance for the exposure group versus the control group, $\Delta\chi^2$ (3) = 2.672 *n.s.*, as well as for gender group, $\Delta\chi^2$ (3) = 2.787, *n.s.* These findings support the scalar invariance ("strong invariance") of GL-IAT across exposure versus control groups and across gender groups. Hence, the mean D scores are comparable across groups in hypothesis testing. I find also non-significant change in chi-square test on residual invariance for exposure versus control group, $\Delta\chi^2$ (4) = 1.648, *n.s.*, as well as for gender group, $\Delta\chi^2$ (4) = 4.028, *n.s*. These findings support the residual invariance ("strict invariance") of GL-IAT across exposure versus control groups and across gender groups: the residual variances of observed parcel scores of GL-IAT are equivalent across groups.

Table 4.6b presents nested models on multiple-group (exposure vs. control) MI tests of P-IAT at Phase 1. Baseline model has acceptable levels of fit indices supporting P-IAT's configural invariance across exposure versus control groups, χ^2= 9.722, *df* = 4, *p* = .045, CFI = .99, TLI= .98, RMSEA (90% CI) = .09 (.01-.18), as well as respondent gender groups, χ^2= 7.146, *df* = 4, *p* = .128, CFI = 1.00, TLI= .98, RMSEA (90% CI) = .08 (.00-.17). The analyses support metric invariance of P-IAT for exposure versus control group, $\Delta\chi^2$ (3) = 2.664 *n.s.*, and participant gender groups, $\Delta\chi^2$ (3) = 6.349, *n.s.* Scalar invariance of P-IAT across exposure versus control group, $\Delta\chi^2$ (3) = .518, *n.s.*, and gender groups, $\Delta\chi^2$ (3) = 1.053, *n.s.*, are also supported.

Finally, residual invariance is found across exposure versus control group, $\Delta \chi^2$ (4) = 2.639, *n.s.*, and gender groups, $\Delta \chi^2$ (4) = 1.836, *n.s.*

Table 4.6b.
Multiple Group Measurement Invariance Tests of P-IAT at Phase 1

Model	χ^2	*df*	p	$\Delta\chi^2$	Δdf	CFI	TLI	RMSEA (90% CI)
Respondent gender								
Configural	7.146	4	.128	-	-	.100	.98	.08 (.00-.17)
Metric	13.495	7	.061	6.349	3	.99	.98	.08 (.00-.15)
Scalar	14.548	10	.145	1.053	3	.99	.99	.06 (.00-.12)
Residual	16.384	14	.291	1.836	4	1.00	1.00	.04 (.00-.09)
Exposure vs. control								
Configural	9.722	4	.045	-	-	.99	.98	.09 (.01-.18)
Metric	12.386	7	.089	2.664	3	.99	.99	.07 (.00-.14)
Scalar	12.904	10	.229	.518	3	.100	.100	.04 (.00-.11)
Residual	15.543	14	.232	2.639	4	1.00	1.00	.04 (.00-.10)

Note. All loadings of each model were statistically significant.

In sum, analyses suggest that GL-IAT and P-IAT Phase 1 measurement have configural, metric, scalar and residual invariance across the exposure group versus the control group as well as across participant gender groups. Hence, the equivalence of measurement models legitimizes mean and variance level comparisons of IATs scores across groups at Phase 1 and tests of MI across time.

4.4.Longitudinal Measurement Invariance (MI) Models

The findings in the previous sub-section confirm the MI models of GL-IAT and P-IAT across groups at Phase 1. Hence, I further tested MI of GL-IAT, P-IAT and ILTs scale across phases and across groups. I specify the following models:

1. Longitudinal MI of GL-IAT across gender groups,
2. Longitudinal MI of P-IAT across gender groups,
3. Longitudinal MI and structural invariance (SI) of GL-IAT across the exposure group versus the control group,
4. Longitudinal MI and SI of P-IAT across the exposure group versus the control group, and,
5. Longitudinal MI of ILTs scale.

4.4.1. Longitudinal MI of IATs across gender groups

I, first, explore the models of longitudinal MI of GL-IAT across three phases[11]. However, the fit indices of the longitudinal configural invariance model are not acceptable across gender groups, χ^2= 1267.013, *df* = 89, *p* < .001, CFI = .74, TLI= .71, RMSEA (90% CI) = .18 (.15-.22). I, therefore, estimate the model testing MI of GL-IAT across Phase 1 and Phase 2. Analysis confirm configural invariance of GL-IAT across two phases and gender groups, χ^2= 67.167, *df* = 40, *p* = .005, CFI = .94, TLI= .91, RMSEA (90% CI) = .08 (.05-.12), yet not metric invariance, $\Delta\chi^2$ (10) = 24.069, *p* < .05. Based on the inspection of modification indices, I relax equality constraints on g14 (Phase 1 measure of g4). Analysis confirms non-significant chi square statistics compared to baseline model, $\Delta\chi^2$ (8) = 13.709, *n.s.*, supporting partial metric invariance of GL-IAT across gender groups. Scalar and residual invariance across gender groups are also confirmed for GL-IAT, $\Delta\chi^2$ (6) = 9.545, *p* > .05 and $\Delta\chi^2$ (10) = 15.741, *p* > .05 respectively. Table 4.7 presents the fit indices for nested longitudinal MI models of GL-IAT (Phase 1 and Phase 2) across female and male participants.

Table 4.7.
Longitudinal Measurement Invariance of GL-IAT (Phase 1 and Phase 2) and P-IAT (Three Phases) across Participant Gender Groups

Longitudinal MI across Gender Groups	χ^2	*df*	*p*	$\Delta\chi^2$	Δdf	CFI	TLI	RMSEA (90% CI)
GL-IAT (Phase 1 & Phase 2)								
Configural	67.167	40	.005	-	-	.94	.91	.08 (.05-.12)
Metric	91.236	50	.001	24.069*	10	.91	.90	.09 (.06-.12)
Partial metric	80.876	48	.002	13.709	8	.93	.91	.08 (.05.11)
Scalar	71.331	54	.057	9.545	6	.96	.96	.06 (.00-.09)
Residual	87.072	64	.029	15.741	10	.95	.95	.06 (.02-.09)
P-IAT (Three phases)								
Configural	269.377	89	p<.001	-	-	.90	.89	.10 (.09-.12)
Metric	283.549	105	p<.001	14.172	16	.90	.90	.10 (.09-.12)
Scalar	290.327	120	p<.001	6.778	15	.91	.90	.09 (.08-.11)
Residual	291.299	140	p<.001	.972	20	.92	.92	.08 (.07-.09)

* *p* < .05. *Note*. All loadings are statistically significant for each model. The equality constraint on g14 was relaxed in the partial metric invariance model of GL-IAT.

[11] Note that MI of GL-IAT across three phases was exploratory and not necessary to test relevant hypotheses.

Second, I test the longitudinal MI of P-IAT across gender groups. As Table 4.7 presents, the configural invariance of P-IAT over three phases across gender group has acceptable levels of fit indices, χ^2= 269.377, *df* = 89, *p* < .001, CFI = .90, TLI= .89, RMSEA (90% CI) = .10 (.09-.12). The fit indices are better for the model on metric invariance, χ^2= 283.549, *df* = 105, *p* < .001, CFI = .90, TLI= .90, RMSEA (90% CI) = .10 (.09-.12). The likelihood ratio test support the metric invariance of P-IAT across time and gender groups, $\Delta\chi^2$ (16) = 14.172, *p* >.05. Scalar invariance test across time and gender have also better fit, χ^2= 290.327, *df* = 120, *p* < .001, CFI = .91, TLI= .90, RMSEA (90% CI) = .09 (.08-.11). The likelihood ratio test support scalar invariance, $\Delta\chi^2$ (15) = 6.778, *n.s.* Finally, fit indices, χ^2= 291.299, *df* = 140, *p* < .001, CFI = .92, TLI= .92, RMSEA (90% CI) = .08 (.07-.09), and the likelihood ratio test, $\Delta\chi^2$ (20) = .972, *n.s.*, support residual longitudinal invariance of P-IAT across gender groups.

In sum, analyses suggest that GL-IAT and P-IAT had configural, (partial) metric, scalar and residual invariance across time and across gender groups. I, furthermore, test the longitudinal MI and structural invariance of IATs across the exposure group versus the control group.

4.4.2. Longitudinal MI and SI of GL-IAT across the exposure group versus the control group

I specify longitudinal MI models of GL-IAT across three phases to explore any patterns of implicit stereotyping toward female leadership across the exposure group and the control group. However, similar to tests across gender groups, longitudinal MI tests across three phases yield misfit to the data. That is, the configural invariance of GL-IAT is not supported across three phase of measurement. Hence, I specify longitudinal MI models of GL-IAT across Phase 1 and Phase 2. Table 4.8a demonstrates fit indices of models of multiple-group longitudinal MI and SI of GL-IAT across Phase 1 and Phase 2.

Table 4.8a.
Models of Multiple Group Longitudinal Measurement and Structural Invariance of GL-IAT across Phase 1 and Phase 2 for Exposure versus Control Groups

Longitudinal MI	χ^2	*df*	*p*	$\Delta\chi^2$	Δdf	CFI	TLI	RMSEA (90% CI)
Configural	80.104	40	<.001	-	-	.93	.90	.08 (.06-.11)
Metric	98.336	50	<.001	18.232	10	.91	.90	.08 (.06-.11)
Scalar	79.679	58	.028	.425	8	.96	.96	.05 (.02-.08)
Residual	88.750	64	.022	13.257	10	.94	.95	.06 (.02-.09)
Structural invariance models								
Factor variance	92.153	66	.019	3.403	2	.94	.95	.06 (.03-.09)
Factor covariance	92.820	67	.020	.667	1	.94	.95	.06 (.03-.09)
Factor mean	93.066	68	.024	.246	1	.94	.95	.06 (.02-.09)

* p < .05. *Note*. All loadings are statistically significant for each model.

Analysis confirms configural invariance of GL-IAT across two phases, χ^2= 80.104, *df* = 40, *p* < .001, CFI = .93, TLI= .90, RMSEA (90% CI) = .08 (.06-.11). The non-significant chi square statistics compared to the baseline model, $\Delta\chi^2$ (10) = 18.232, *n.s.*, support metric invariance of GL-IAT. Longitudinal scalar and residual invariance across exposure versus control groups are also confirmed for GL-IAT, $\Delta\chi^2$ (8) = .425, *n.s.*, and $\Delta\chi^2$ (10) = 13.257, *n.s.*, respectively. The equivalence of latent factor variance, $\Delta\chi^2$ (2) = 3.403, *n.s*., latent factor covariance, $\Delta\chi^2$ (1) = .667, *n.s.*, and the factor mean invariance, $\Delta\chi^2$ (1) = .246, *n.s.*, are also supported across phases and exposure versus control groups. Hence, as shown at Table 4.8a, MI and structural equivalence of GL-IAT across Phase 1 and Phase 2 and across municipality groups are confirmed.

Taken together, exposure to a female leader does not predict any significant gamma change or alpha change in GL-IAT scores of participants who are exposed to a female mayor across two phases. These findings support previous ANOVA findings, which revealed non-significant differences between the exposure group and the control group on Phase 2 scores of GL-IAT compared to Phase 1 scores. Hence, they are other evidences that refuted Hypothesis 1a and Hypothesis 1b.The confirmation of MI of GL-IAT, however, enables the valid comparison of the means and variances of GL-IAT scores across two phases and across groups.

4.4.3. Longitudinal MI and SI of P-IAT across the exposure group versus the control group

I test the longitudinal MI and structural invariance of P-IAT across three phases for the exposure group and the control group. Table 4.8b presents the model fit indices of MI and structural invariance tests. Analysis confirms configural invariance of P-IAT across three phases and exposure versus control group, χ^2 = 130.397, *df* = 89, *p* = .003, CFI = .97, TLI= .96, RMSEA (90% CI) = .07 (.05-.09). Analysis also show non-significant chi square statistics compared to the baseline model, $\Delta\chi^2$ (16) = 19.213, *n.s.*, supporting longitudinal metric invariance of P-IAT across exposure versus control groups. Longitudinal scalar and residual invariance across exposure versus control groups are also confirmed for P-IAT, $\Delta\chi^2$ (15) = 22.882, *n.s.* and $\Delta\chi^2$ (20) = 16.870, *n.s.*, respectively. Structural equivalence of P-IAT across phases and across municipality groups is also confirmed. Nested on residual invariance model, test on equivalence of latent factor variance of P-IAT indicates non-significant likelihood ratio, $\Delta\chi^2$ (4) = 4.294, *n.s*. The equivalence of latent factor covariance, $\Delta\chi^2$ (5) = 3.841, *n.s.*, and the factor mean invariance, $\Delta\chi^2$ (1) = .466, *n.s.*, are also supported across time and exposure versus control groups of P-IAT.

Table 4.8b.
Multiple Group Longitudinal Measurement Invariance and Structural Invariance Models of P-IAT across Three Phases for Exposure versus Control Groups

Longitudinal MI	χ^2	*df*	*p*	$\Delta\chi^2$	Δdf	CFI	TLI	RMSEA (90% CI)
Configural	130.397	89	.003	-	-	.97	.96	.07 (.05-.09)
Metric	149.610	105	.003	19.213	16	.97	.97	.07 (.04-.09)
Scalar	172.492	120	.001	22.882	15	.97	.97	.06 (.04-.09)
Residual	189.362	140	.004	16.870	20	.97	.97	.06 (.03-.08)
Structural invariance models								
Factor variance	193.656	144	.004	4.294	4	.97	.97	.06 (.03-.08)
Factor covariance	197.497	149	.005	3.841	5	.97	.97	.06 (.03-.08)
Factor mean	197.963	150	.005	.466	1	.97	.97	.06 (.03 - .08)

Note. All loadings are statistically significant for each model.

The measurement invariance and structural equivalence of P-IAT across phases and groups suggest that, in contrast to expectations, there is not any significant gamma change in P-IAT after exposure to female municipality mayor. This refutes Hypothesis 1d, which hypothesizes that exposure to female municipality mayor would predict

significant gamma change in P-IAT D score across three phases. It also pinpoints the lack of alpha change – significant mean difference - in P-IAT D scores, potentially refuting Hypothesis 1c. I further investigate change trajectory - as another indicator of alpha change of P-IAT D scores - within latent growth modeling framework.

To sum up, tests on models of longitudinal MI of P-IAT suggest that P-IAT is invariant across gender groups as well as across the exposure group and the control group. This finding is a precondition to conduct LGM and therefore I proceed to examine within person variations in P-IAT across phases and groups. Tests on models of longitudinal MI of GL-IAT D scores are not invariant across three phases and therefore within variations of GL-IAT are not explored within LGM framework. However, GL-IAT has MI and structural invariance across phases and groups. This finding suggests that one can compare Phase 1 and Phase 2 mean scores of GL-IAT across time and groups, but with a caution given that test-retest reliability is low. Given the presence of scalar invariance (strong MI), I calculate latent change score of GL-IAT (Phase 2 – Phase 1) following the previous analytical recommendations and past research (e.g., Grimm, An, McArdle, Zonderman & Resnick, 2012; McArdle, 2009; McArdle & Grimm, 2010; Selig & Preacher, 2009).

4.4.4. Longitudinal MI of ILT scale across the exposure group versus the control group

Finally, I test the longitudinal MI of ILTs scale scores across Phase 1 and Phase 3 for the exposure group versus the control group. Table 4.9 presents the fit indices of longitudinal MI models of ILTs scale across the exposure group versus the control group.

Analysis confirms configural invariance of ILTs scale across two phases, χ^2= 745.149, *df* =406, $p < .001$, CFI = .91, TLI= .90, RMSEA (90% CI) = .08 (.07-.09). The test of metric invariance reveals non-significant change in chi square in proportion to change in degrees of freedom, $\Delta\chi^2$ (14) = 22.433, *n.s.*, supporting metric equivalence of ILTs scale. Longitudinal scalar invariance across exposure versus control groups is also confirmed for ILTs scale, $\Delta\chi^2$ (22) = 23.150, *n.s.* However, the model of longitudinal residual invariance is not confirmed, $\Delta\chi^2$ (22) = 84.943, $p < .01$.

Considering the modification indices, I relax equality constraints of nine items across groups and across time (i.e., ILT37-Bold, ILT315-Strong, ILT329-Able to exert authority, ILT322-Charisma, ILT39-Dynamic, ILT126-Motivated, ILT131-Sincere, ILT129-Able to exert authority, and IL19-Dynamic). Partial residual invariance model is confirmed when compared with the scalar invariance model, $\Delta\chi^2$ (13) = 19.801, n.s.

Table 4.9.
Longitudinal Measurement Invariance Models of ILT Scale across the Exposure Group vs. the Control Group

Measurement Invariance	χ^2	*df*	*p*	$\Delta\chi^2$	Δdf	CFI	TLI	RMSEA (90% CI)
Configural	745.149	406	<.001	-	-	.91	.90	.08 (.07-.09)
Metric	767.582	420	<.001	22.433	14	.91	.90	.08 (.07-.09)
Scalar	790.732	442	<.001	23.150	22	.91	.90	.08 (.07-.09)
Residual	875.675	464	<.001	84.943**	22	.90	.90	.09 (.08-.10)
Partial residual	810.533	455	<.001	19.801	13	.91	.90	.08 (.07-.09)

Partial residual invariance model relaxed equality constraint of following items across groups: ILT37 bold, ILT315 Strong, ILT329 Able to exert authority, ILT322 Charisma, ILT39 Dynamic, ILT126 Motivated, ILT131 Sincere, ILT129 Able to exert authority, and IL19 Dynamic.

To sum up, the results suggest that ILTs scale has partially strict MI (partial residual invariance) across phases. This indicates that the variance of items not explained by the latent factor is the same across Phase 1 and Phase 2, except for these nine items. Given the partially strict MI of ILTs scale, I calculate latent change score of the sensitivity sub-scale across Phase 1 and Phase 3 following the previous analytical recommendations and past research (e.g., Grimm et al., 2012; McArdle, 2009; McArdle & Grimm, 2010; Selig & Preacher, 2009).

4.5. Within Person Change Trajectory of Implicit Prejudicial Attitudes toward Female Leadership: Multiple Indicator Latent Growth Modelling (MLGM)

One of the main hypotheses of the current study is whether exposure to female municipality mayor would predict significant within-person variation (alpha change) in generalized implicit prejudicial attitudes toward female leadership across three phases (Hypothesis 1c). To test Hypothesis 1c, I conduct nested models of MLGM, following the analytical procedures outlined in the data analysis section and reported in prior research (e.g., Bentein et al., 2005; Chan, 1998; Cheong, MacKinnon & Khoo,

2003; Geiser et al., 2013; Lance & Vandenberg, 2000; Muthen & Curran, 1997; Muthen & Muthen, 1998-2012). Table 4.10 shows the unstandardized parameter estimates (standard errors) of MLGM on P-IAT across three phases.

Table 4.10.
Unstandardized Parameter Estimates (Standard Errors) of MLGM Models on P-IAT

	Model 1	Model 2	Model 3: Multiple group	
Growth parameters	Control group	Exposure group	Control group	Exposure group
Intercept mean	.000 (.000)	.000 (.000)	.000 (.000)	-.134* (.057)
Intercept variance	.152*** (.038)	.092* (.042)	.152*** (.038)	.078* (.039)
Slope mean	-.073** (.021)	-.081** (.027)	-.073** (.021)	-.020 (.037)
Slope variance	.013 (.012)	.004 (.017)	.013 (.012)	.002 (.016)
Covariance btw. intercept-slope	-.039* (.019)	-.015 (.027)	-.039* (.019)	-.010 (.021)

*p < .05. **p < .01. ***p < .001. *Note*. The values represent unstandardized estimates as recommended in prior research (e.g., Bentein et al., 2005).

Single-Group MLGMs. I first fit MLGM model separately for the control group in Model 1 and the exposure group in Model 2. The main goal of Model 1 and Model 2 is to test whether the change trajectory fits to the data of the exposure group and the control group. Model 1 yields an acceptable fit, χ^2 (66) = 93.411, p = .015, CFI = .97, TLI = .97, RMSEA (90% CI) = .06 (.03-.09) and shows significant decrease in P-IAT scores across three phases for the control group. Model 2 has also acceptable fit to data, χ^2 (66) = 83.996, p = .07, CFI = .97, TLI = .97, RMSEA (90% CI) = .06 (.00-.09), and decrease in P-IAT D scores for the exposure group. The decrease in P-IAT scores suggests decreasing implicit prejudice toward female leadership across three phases for both the exposure group and the control group.

Multiple-Group MLGM. Subsequently, I fit MLGM simultaneously on the control group and the exposure group in multiple group analysis (Model 3). Appendix L presents the graphic representation of Model 3. Given the MI and structural invariance of P-IAT across the exposure group and the control group, I retain the equality constraints on residuals and the variance of latent P-IAT factors across groups[12].

[12] I, initially, retained all equality constraints of measurement invariance models. However, the model did not converge albeit increasing the number of iterations and changing the starting values as suggested before (e.g., Muthen & Muthen, 1998-2012; personal communication with Muthen & Muthen's stat team, 2015). Given that P-IAT has measurement invariance and structural invariance, the equality constraints on only item residuals and

The Model 3 has a good fit to the data, χ^2 (132) = 172.366, p = .01, CFI = .98, TLI = .98, RMSEA (90% CI) = .06 (.03-.08). It shows that intercept mean of P-IAT has significantly negative value in the exposure group ($M_{intercept}$= -.134, $SE_{intercept}$= .057, $p < .05$). However, it does not differ across the exposure group and the control group, $\Delta\chi^2$ (1) = .900, *n.s.*, suggesting no significant difference between the exposure group and the control group on baseline (Phase 1) implicit prejudicial attitudes toward female leadership[13].

The mean of slope is significant for the control group (M_{slope} = -.073, SE_{slope} = .021, $p < .01$), but not for the exposure group (M_{slope} = -.020, SE_{slope} = .037, *n.s.*). However, the control group and the exposure group do not significantly differ on the slope of P-IAT, $\Delta\chi^2$ (1) = .721, *n.s.* This finding refutes Hypothesis 1c as predicted based on findings suggesting the structural invariance of P-IAT: exposure to female leadership do not predict significant change in implicit prejudice compared to the control group.

The significant variance estimates of intercepts in the exposure group ($\sigma^2_{intercept}$ = .078, *SE* $\sigma^2_{intercept}$ = .039, $p < .05$*)* and the control group ($\sigma^2_{intercept}$ = .152, *SE* $\sigma^2_{intercept}$ = .038, $p < .001$*)* suggest that there is a within group variability at baseline (Phase 1) scores of P-IAT. Participants significantly differ on their level of implicit prejudice toward female leadership at the beginning within each group. In contrast, the variance estimates of slopes in the exposure group (σ^2_{slope}= .002, *SE* σ^2_{slope} = .016, *n.s.*) and the control group (σ^2_{slope} = .013, *SE* σ^2_{slope} = .012, *n.s.*) are not significant. This demonstrates that there is no significant within person variability in P-IAT – that is, no significant change trajectory of implicit prejudice. Predictors other than exposure to female leadership might explain the change pattern of P-IAT D scores.

Functional form of the P-IAT trajectory. I explore whether the slope of P-IAT scores has a linear form or not. The linear form is already tested in Model 3 by constraining the factor loadings of slope equal to 0, 1 and 2. I optimally estimate the functional form by constraining the factor loadings of two phases (0 & 1) but relaxing

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factor variances were legitimate and sufficient for the estimation of the model (personal communication with Kisbu-Sakarya, 2015; Preacher, 2010).

[13] Throughout the paper, I tested group differences as follows (Muthen & Muthen, 1998-2012): I put equality constraint on intercept (or, slope) across groups to test group differences on intercept (or, slope) mean. Then I ran this model and calculated $\Delta\chi^2$ and Δdf. If the likelihood ratio test was (not) significant then group difference was (not) significant.

the third loading. The results indicate that the optimal form of change do not significantly improve the fitness of the model over the linear form, $\Delta\chi^2$ (2) = 1.256, *n.s*. Hence, I retain the linear form of change in consecutive analyses.

Participant characteristics as covariates. I further estimate the structural relationship between growth parameters of P-IAT and participant characteristics – participant gender (Model 4a), municipal tenure (Model 4b), sectoral tenure (Model 4c) and prior exposure to female leadership (Model 4d) – in multiple group MLGM frame. I entered participant characteristics separately as covariates on Model 3. The fit indices are good for Model 4a [χ^2(152) = 257.598, p <.001, CFI = .94, TLI = .94, RMSEA (90% CI) = .08 (.07-.10)], Model 4b [χ^2(152) = 188.426, p = .024, CFI = .98, TLI = .97, RMSEA (90% CI) = .05 (.02-.07)], Model 4c [χ^2(152) = 184.601, p = .037, CFI = .98, TLI = .98, RMSEA (90% CI) = .05 (.01-.07)], and Model 4d [χ^2(152) = 170.959, p = .139, CFI = .99, TLI = .99, RMSEA (90% CI) = .04 (.00-.06)].Table 4.11 presents unstandardized parameter estimates (standard errors).

Table 4.11.
Parameter Estimates (Standard Errors) and Model Fit Indices of MLGM Models on P-IAT with Participant Characteristics as Covariates

Dependent variable: Slope of P-IAT	Model 4a Participant Gender as covariate		Model 4b Municipal tenure as covariate		Model 4c Sectoral tenure as covariate		Model 4d Prior exposure as covariate	
	Exposure	Control	Exposure	Control	Exposure	Control	Exposure	Control
Intercept (constant)	-.022 (.048)	-.176*** (.029)	-.072 (.054)	-.069* (.033)	-.083 (.055)	-.074* (.034)	-.044 (.064)	-.079* (.034)
Participant gender	-.124* (.061)	-.045 (.049)	-	-	-	-	-	-
Municipal tenure			.080 (.065)	.047 (.043)	-	-	-	-
Sectoral tenure					.096 (.065)	.069 (.043)	-	-
Prior exposure to female managers							.028 (.070)	.069 (.042)

† p = .06. *p < .05. **p < .01. ***p < .001. *Note*. The values represent unstandardized estimates as recommended in prior research (e.g., Bentein et al., 2005).

The results suggest that participant characteristics except participant gender do not predict the slope mean of P-IAT at a significant level. Employees' municipal tenure (Model 4b), sectoral tenure (Model 4c) and prior experience with women's

leadership (Model 4d) are not significantly related to the change trajectory of implicit prejudice toward female leadership. In contrast, the results of Model 4a indicate that participant gender predict significantly negative slope of P-IAT in the exposure group (b = -.124, SE = .061, $p < .05$) but not in the control group (b =-.045, SE = .049, *n.s.*). This indicates decreasing implicit prejudice toward female leadership for males. The likelihood ratio test is, however, not significant when equality constraint is put on gender across the exposure group versus the control group, $\Delta\chi^2$ (1) = 3.506, *n.s*, suggesting no difference between the exposure group and the control group in terms of the role of gender in predicting the slope of P-IAT.

To sum up, the findings yield that there is no significant main difference between exposure to female mayors and working with male mayors in terms of alpha change or gamma change in implicit prejudice toward female leadership, refuting both Hypothesis 1c and Hypothesis 1d. However, being male predicts decreasing levels of implicit prejudice toward female leadership in the exposure group and the control group. The effect is not significant in the control group and there was no group difference between the exposure group and the control group. Therefore, I explore the effect of participant gender and control it if necessary in further MLGM analyses.

4.6.Mediating Role of Change in Implicit Stereotyping

I hypothesized that the level of municipality context dependent automatic association between female and leadership (at Phase 2) would predict (alpha) change in P-IAT across three periods (Hypothesis 2a) and gamma changes in P-IAT scores (Hypothesis 2b). I further predicted that controlling for Phase 1 measure, implicit stereotypic attitude toward female leadership (at Phase 2) would mediate the relationship between exposure to female mayor and generalized implicit prejudice toward female leadership (Hypothesis 2c).

To test Hypothesis 2a and Hypothesis 2b, I conduct multiple group MLGMs on P-IAT with change in GL-IAT (latent change score) as covariate. As noted before, I utilize the latent change score (or the latent difference score, LDS; McArdle, 2009) in particularly specifying mediational analysis (Selig & Preacher, 2009) of GL-IAT. Given the strong invariances, I retain equality constraints on factor loadings and

intercepts of GL-IAT across the exposure group and the control group. Table 4.12 shows the unstandardized parameter estimates (standard errors) of Model 5a.

Table 4.12.
Unstandardized Parameter Estimates (Standard Errors) of MLGM Models on P-IAT with GL-IAT as Covariate (Model 5a) and the Mediator (Model 5b)

	Model 5a		Model 5b
	Exposure	Control	
Intercept (constant)	-.041 (.038)	-.065** (.023)	-.074** (.022)
ΔGL-IAT → Slope of P-IAT	-.134 (.081)	.020 (.066)	.049 (.036)
Exposure to female leadership → Slope of P-IAT	-	-	.044 (.037)
Exposure to female leadership → ΔGL-IAT	-	-	.005 (.010)

† $p = .06$. **$p < .01$. *Note*. ΔGL-IAT = latent change score between Phase 1 score and Phase 2 score of GL-IAT. The values represent unstandardized estimates as recommended in prior research (e.g., Bentein et al., 2005). Model 5b has a good fit to the data, $\chi^2(207) = 271.100$, $p = .002$, CFI = .97, TLI = .97, RMSEA (90% CI) = .04 (.03-.05).

The fit indices of Model5a are satisfactory, $\chi^2(392) = 500.634$, $p < .01$, CFI = .94, TLI = .95, RMSEA (90% CI) = .05 (.04-.07). The results yield that change in GL-IAT (ΔGL-IAT) does not significantly predict the slope of P-IAT in neither the exposure group nor the control group, refuting Hypothesis 2a. I relax the equality constraints of latent factor variances of P-IAT to capture gamma change (Thompson & Hunt, 1996), yet the results are almost similar and refuting Hypothesis 2b. These insignificant findings also refute the hypothesis on the significant mediational effect of implicit stereotyping (Hypothesis 2c). Indeed, the mediational model on the MLGM (e.g., Cheong et al., 2003; Selig & Preacher, 2009), Model 5b, shows the non-significant mediational effect of the change in GL-IAT scores across two phases.

In sum, findings indicate that change in implicit stereotyping is not significantly related to alpha change (Hypothesis 2a) or gamma change (Hypothesis 2b) in generalized implicit prejudice toward female leadership across the exposure group and the control group, refuting the proposed mediational impact of implicit stereotyping (Hypothesis 2c).

4.7.Mediating Role of Change in Sensitivity Dimension of ILTs

I hypothesized that change in the sensitivity dimension of ILT would be significantly related to change in GL-IAT D score (Hypothesis 3a) and the slope of P-IAT D score (Hypothesis 3b). I, moreover, predicted that the level of sensitivity content of leadership prototypes for municipality context (at Phase 3) would mediate the relation between municipality context dependent implicit stereotyping (at Phase 2) and generalized implicit prejudice against female leadership (at Phase 3) in the exposure group compared to the control group (Hypothesis 3c).

To test Hypothesis 3a and Hypothesis 3b, I regress latent change score of ILT-sensitivity on the change score of GL-IAT (Model 6a) and the change trajectory of P-IAT (Model 6b). Given the strong invariance of two measures, I retain equality constraints on factor loadings and intercepts across the exposure group and the control group. Model 6a has an acceptable fit to the data, χ^2 (315) = 433.564, p < .001, CFI = .92, TLI = .93, RMSEA (90% CI) = .08 (.06-.10) and The fitness of Model 6b is good, χ^2(457) = 561.041, p = .001, CFI = .96, TLI = .96, RMSEA (90% CI) = .06 (.04-.08). In contrast to the hypotheses, change in GL-IAT score across Phase 1 and Phase 2 or the change trajectory of P-IAT across three phases are not significantly related to change in ILTs scale score in the exposure group or the control group. Hypothesis 3a and Hypothesis 3b are not supported, and therefore there is no need to test. Indeed, the mediating effect of change in ILT-sensitivity scale on the relationship between change in GL-IAT and the slope of P-IAT across the exposure group and the control group is not significant (Model 6c), refuting Hypothesis 3c. Table 4.13 reports the unstandardized estimates (standard errors) of the models.

In sum, the findings indicated that change in the sensitivity dimension of ILTs is not related to the latent change in implicit stereotyping or the change trajectory of implicit prejudice, refuting Hypothesis 3a, Hypothesis 3b and hence does not mediate their relation, refuting Hypothesis 3c.

Table 4.13.
Unstandardized Parameter Estimates (Standard Errors) of the Relationship among ILT sensitivity, GL-IAT Scores and the Slope of P-IAT

	Model 6a Dependent variable: ΔILT-sensitivity		Model 6b Dependent variable: Slope of P-IAT		Model 6c Mediation analysis	
	Exposure	Control	Exposure	Control	Exposure	Control
Intercept (constant)	-.042 (.058)	.000 (.000)	-.007 (.045)	-.069* (.032)	-.020 (.034)	-.076*** (.021)
ΔGL-IAT→ Slope of P-IAT	.243 (.455)	.119 (.398)	-	-	-.108 (.075)	-.010 (.055)
ΔGL-IAT→ ΔILT-sensitivity			-	-	-.548 (.606)	-.050 (.273)
ΔILT-sensitivity →Slope of P-IAT			.011 (.024)	.016 (.014)	-.003 (.024)	.005 (.013)

*$p < .05$. ***$p < .001$. *Note*. The values represent unstandardized estimates as recommended in prior research (e.g., Bentein et al., 2005). The fit indices of Model 6c are, χ^2 (892) = 1208.691, $p < .001$, CFI = .89, TLI = .89, RMSEA (90% CI) = .08 (.05-.10). Though CFI and TLI are below .90 point, the confidence interval of RMSEA value involves .05, indicating an acceptable level of model fitness.

4.8.Moderating Effect of Perceived Municipality Performance

I also hypothesized that the perceived success of mayor measured with municipality performance would moderate the relationship between exposure to female mayor and municipality context dependent implicit stereotypic attitudes toward female leadership (at Phase 2), controlling for Phase 1 measures (Hypothesis 4). The higher the perceived success of female mayors, the more likely that exposure would be related to higher cognitive associations between women and leadership (therefore lower implicit stereotyping).

Prior to testing Hypothesis 4, I explore whether there are significant within group and between group variances in the indicators of perceived success of mayor: total score of municipality performance, performance on strategy, performance on public affairs and performance on internal affairs. I run a hierarchical linear model to test whether there are any significant differences at the group level (municipality) on the outcome variables - each performance variable and calculate ICCs for each indicator (Bliese, 2000; Klein et al., 2000). The results indicate significant between-group variability in overall perceived performance of municipality, χ^2 (10, N=11) = 61.49, $p < .001$. The 33% of the variance in perceived overall performance at individual level (ICC1 = .33) can be explained by being employee of the given municipality.

Moreover, municipalities seem to be reliably (ICC2 = .82) differentiated in terms of employees' perceived performance of municipalities. The findings are similar for the perceived performance on strategy, $\chi^2(10, N=11) = 58.76$, $p < .001$, ICC1=.33, ICC2=.81; and the perceived performance on internal relations, $\chi^2(10, N=11) = 69.92$, $p < .001$, ICC1=.35, ICC2=.84. There is also significant between group variability in the perceived performance on public affairs, $\chi^2(10, N=11) = 35.25$, $p < .001$, ICC1=.28, albeit the reliability estimate of group level mean is slightly below .70 cut-off point (Klein et al., 2000), ICC2=.68.

Overall, these results indicate the significant differences on municipal level perceived performances and therefore support the aggregation of perceived performance score at the municipality level. I calculate the aggregated score of perceived performance. I cautiously evaluate the results for the performance on public affairs. Given that the hypotheses are on the employees' perception on the performance of the mayor, I utilize centering to examine employees' deviation from their colleagues in the same municipality. In order to capture employees' individual level deviation from the municipality level perceived performance (i.e., Hofmann & Gavin, 1998), I center perceived performance scores for each participant at group (i.e., municipal) mean ($performance_{centered}$ = individual score – group mean).

To test Hypothesis 4, I specify multiple group (exposure group versus control group) models in which GL-IAT Phase 2 is regressed on its Phase 1 measure, overall performance of municipality and group centered overall performance (Model 7a). The model 7a has good fitness to the data [$\chi^2(72) = 72.550$, $p = .460$, CFI = 1.00, TLI = 1.00, RMSEA (90% CI) = .01 (.00-.08)]. Table 4.14a presents the parameter estimates. The results suggest no significant effect of perceived performance on the phase 2 score of GL-IAT in the exposure group or in the control group. Therefore, I examine the interactive effect of participant gender. GL-IAT Phase 2 is regressed on its Phase 1 measure, participant gender, performance indicators and their group centered scores as well as their interaction with gender.

Table 4.14a

Unstandardized Parameter Estimates (Standard Errors) of Moderating Effect of Municipal Performance Indicators on GL-IAT

Dependent variable:	Model 7a		Model 7b		Model 7c		Model 7d		Model 7e	
GL-IAT Phase 2	Exposure	Control	Exposure	Control	Exposure	Control	Exposure	Control	Exposure	Control
Intercept (constant)	-.628	.000	-.575	.000	-.266	000	-1.136	.000	-.489	.000
	(.517)	(.000)	(.499)	(.000)	(.324)	(.000)	(.702)	(.000)	(.428)	(.000)
GL-IAT Phase 1	.094	.125	.097	.069	.097	.059	.098	.070	.090	.073
	(.122)	(.094)	(.120)	(.098)	(.118)	(.098)	(.119)	(.097)	(.118)	(.103)
Participant gender	-	-	-.004	-.093	-.008	-.092	.003	-.089	.001	-.075
			(.082)	(.077)	(.078)	(.078)	(.081)	(.077)	(.080)	(.080)
Performance-overall	.030	-.049	.020	-.045	-	-	-	-	-	-
	(.057)	(.048)	(.057)	(.043)						
Group mean centered performance-overall	-.001	.019	-.012	.034	-	-	-	-	-	-
	(.061)	(.051)	(.062)	(.048)						
Group mean centered performance-overall* gender	-	-	.050	-.052	-	-	-	-	-	-
			(.040)	(.045)						
Perf.-strategy					.011	-.008	-	-	-	-
					(.042)	(.019)				
Group mean centered perf.-strategy					.018	.001	-	-	-	-
					(.047)	(.026)				
Group mean centered perf.-strategy *gender					.015	-.065	-	-	-	-
					(.038)	(.040)				
Perf.- public							.060	-.079	-	-
							(.082)	(.050)		
Group mean centered perf.-public							-.048	.076	-	-
							(.084)	(.054)		
Group mean centered perf.-public*gender							.051	-.052	-	-
							(.038)	(.043)		
Perf.- internal relation									.023	-.035
									(.054)	(.032)
Group mean centered perf.-internal relations									-.041	-.018
									(.059)	(.039)
Group mean centered perf.-internal*gender									-.070*	-.005
									(.035)	(.039)

† *p = .06*. *$p < .05$. *Note*. The values represent unstandardized estimates as recommended in prior research (e.g., Bentein et al., 2005).

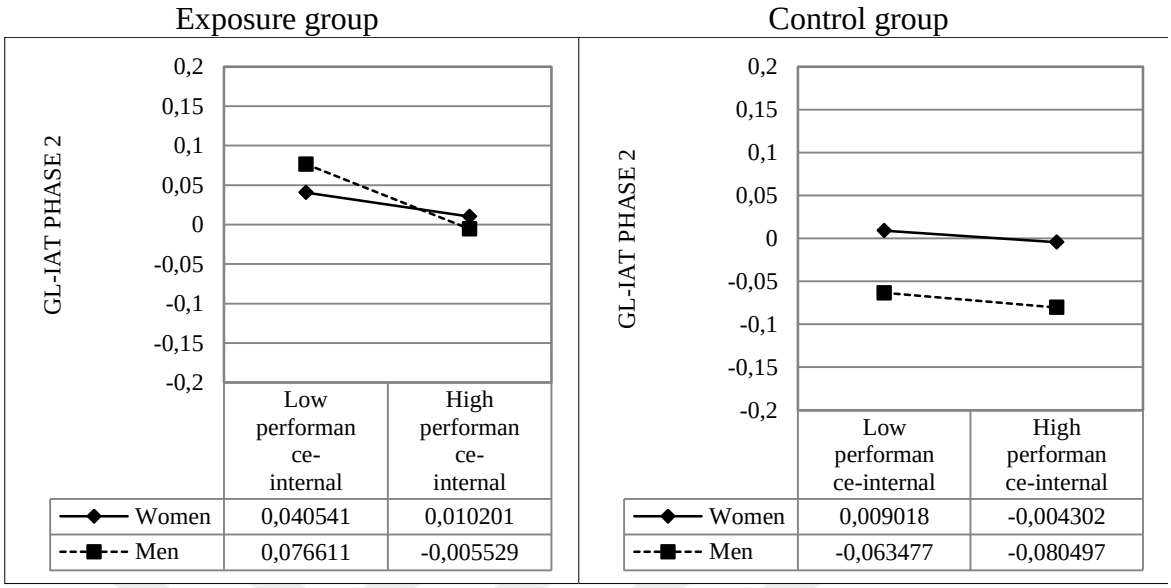
Models separately include the perceived overall performance of municipality (Model 7b), performance on strategy (Model 7c), performance on public affairs (Model 7d) and performance on internal affairs which include the item on the overall perceived performance of mayor (Model 7e). The models have good fitness to the data: Model 7b [$\chi^2(100) = 122.988$, $p = .059$, CFI = .92, TLI = .91, RMSEA (90% CI) = .07 (.00-.10)], Model 7c [$\chi^2(100) = 131.074$, $p = .020$, CFI = .90, TLI = .90, RMSEA (90% CI) = .08 (.03-.11)], Model 7d [$\chi^2(100) = 115.273$, $p = .141$, CFI = .95, TLI = .94, RMSEA (90% CI) = .05 (.03-.09)], Model 7e [$\chi^2(100) = 122.616$, $p = .062$, CFI = .92, TLI = .91, RMSEA (90% CI) = .06 (.00-.10)].

The results suggest that group centered perceived performance on internal affairs and its interaction with being male (Model 7e) significantly predict phase 2 score of GL-IAT, controlling for its Phase 1 scores. That is, males who perceived higher performance on internal relations in relative to other employees in the given municipality have significantly lower GL-IAT in the exposure group ($b = -.070$, $SE = .035$, $p<.05$), compared to the control group ($b = -.005$, $SE = .039$, *n.s.*), $\Delta\chi^2 (1) = 4.209$, $p <.05$. The parameter estimates of other models - Model 7b, Model 7c and Model 7d - do not reach significance.

Overall, these findings partially support Hypothesis 4. The perceived success of mayor in terms of municipality performance on internal affairs does not significantly predict implicit stereotyping at Phase 2 by itself. It significantly interacts with participant gender in determining the level of implicit stereotyping toward female leadership. As shown at the figure in Figure 4.1, male participants who attribute lower success to their female mayor in terms of municipality's internal affairs tend to have higher implicit stereotyping toward female leadership at Phase 2 compared to others (controlling for Phase 1).

As an exploratory analysis, I examine whether the indicators of perceived performance of municipality might moderate the relationship between exposure and change in implicit prejudice toward female leadership. I, first, conduct multiple-group MLGM on P-IAT D scores with overall performance group mean centered overall performance as covariate (Model 7f). Then, the slope of P-IAT is regressed on the interactive effect of participant gender and overall performance (Model 7g), performance on strategy (Model 7h), public affairs (Model 7i) and internal affairs (Model 7j) in predicting the slope of P-IAT.

Figure 4.1.
Interactive Effect of Gender and Perceived Performance on Internal Affair on GL-IAT



The fit indices of all models are satisfactory: Model 7f [$\chi^2(173) = 237.788$, $p = .001$, CFI = .93, TLI = .93, RMSEA (90% CI) = .08 (.05-.10)], Model 7g [$\chi^2(213) = 271.933$, $p = .004$, CFI = .94, TLI = .94, RMSEA (90% CI) = .07 (.04-.09)], Model 7h [$\chi^2(213) = 260.034$, $p = .015$, CFI = .95, TLI = .95, RMSEA (90% CI) = .06 (.03-.09)]; Model 7i [$\chi^2(213) = 271.028$, $p = .004$, CFI = .94, TLI = .94, RMSEA (90% CI) = .07 (.04-.09)]; and Model 7j [$\chi^2(213) = 281.523$, $p = .001$, CFI = .93, TLI = .93, RMSEA (90% CI) = .07 (.05-.10)]. Table 4.14b shows the model estimates.

The results indicate that the interactions between the perceived performance indicators are significant in all models. In Model 7g, males who perceive higher centered overall performance have significantly negative slope of P-IAT in the exposure group ($b = -.083$, $SE = .035$, $p < .05$), compared to the control group ($b = -.009$, $SE = .035$, *n.s.).* Exposure group and control group significantly differ in terms of the interactive effect, $\Delta\chi^2 (1) = 3.989$, $p < .05$.

Table 4.14b.

Unstandardized Parameter Estimates (Standard Errors) of MLGM Models on P-IAT with Municipality Performance and Gender as Covariates

Dependent variable:	Model 7f		Model 7g		Model 7h		Model 7i		Model 7j	
Slope of P-IAT	Exposure	Control	Exposure	Control	Exposure	Control	Exposure	Control	Exposure	Control
Intercept (constant)	.017	.021	-.143	-.048	.006	-.163*	-.393	-.041	-.156	-.084
	(.362)	(.153)	(.357)	(.135)	(.283)	(.074)	(.496)	(.185)	(.335)	(.108)
Participant gender	-	-	.012	-.073	-.002	-.061	.023	-.070	.011	-.074
			(.077)	(.064)	(.079)	(.065)	(.075)	(.064)	(.077)	(.066)
Performance-overall	-.008	-.003	.016	.012	-	-	-	-	-	-
	(.051)	(.023)	(.050)	(.021)						
Group mean centered performance-overall	-.025	.013	-.017	.005	-	-	-	-	-	-
	(.055)	(.029)	(.052)	(.030)						
Group mean centered performance-overall* gender			-.083*	-.009	-	-	-	-	-	-
			(.035)	(.035)						
Perf.-strategy					-.015	-.027*	-	-	-	-
					(.039)	(.013)				
Group mean centered perf.-strategy					.016	-.002				
					(.043)	(.020)				
Group mean centered perf.-strategy *gender					-.077*	-.023	-	-	-	-
					(.036)	(.032)				
Perf.- public							.050	.010	-	-
							(.068)	(.027)		
Group mean centered perf.-public							-.050	.001		
							(.069)	(.034)		
Group mean centered perf.- public*gender							-.097**	-.018	-	-
							(.034)	(.034)		
Perf.- internal relation									.018	.019
									(.048)	(.019)
Group mean centered perf.-internal relations									-.032	-.012
									(.051)	(.029)
Group mean centered perf.- internal*gender									-.067*	-.007
									(.032)	(.032)

† *p = .06. *p* < .05. *Note*. The values represent unstandardized estimates as recommended in prior research (e.g., Bentein et al., 2005).

In Model 7h, perceived performance on strategic issues do not significantly predict significantly negative slope of P-IAT in the exposure group (*b* = -.015, *SE* = .039, *n.s).* The centered performance indicator on strategic issues significantly interact with gender in predicting the slope of P-IAT in the exposure group (*b* = -.077, *SE* = .036, *p* <.05), but not in the control group (*b* = -.023, *SE* = .032, *n.s.*).Accordingly, males who perceive higher performance on strategic issues have significantly negative slope of P-IAT in the exposure group compared to control group, $\Delta\chi^2$ (1) = 4.102 *p* < .05.

In Model 7i, males who perceive higher performance on public affairs have significantly negative slope of P-IAT in the exposure group (*b* = -.097, *SE* = .034, *p* < .01), but not significantly in the control group (*b* = -.018, *SE* = .034, *n.s.).* Exposure group and control group significantly differ in terms this interactive effect, $\Delta\chi^2$ (1) = 5.529, *p* < .05.

Lastly, in Model 7j, males who perceive higher performance on internal relations have significantly negative slope of P-IAT in the exposure group (*b* = -.067, *SE* = .032, *p < .05),* but not significantly in the control group (*b* = -.007, *SE* = .032, *n.s.).* However, exposure group and control group do not significantly differ on this interaction effect, $\Delta\chi^2$ (1) = 2.072 *n.s.* Males who perceived the performance of their female mayor more positively than their coworkers were more likely to exhibit a decreasing trajectory of implicit prejudice toward female leadership as measured by P-IAT.

In sum, these findings partially support Hypothesis 4 by qualifying the effect of perceived performance by participant gender in predicting implicit stereotyping toward female leadership. The perceived performance of municipality in terms of internal affairs and mayor's administrative success significantly interact with being male in determining implicit stereotyping toward female leadership at Phase 2. Male participants who work with female mayor and attribute higher success to the municipality in terms of its internal affairs and mayor performance tend to have lower implicit stereotyping toward female leadership at Phase 2 (controlling for Phase 1). The exploratory analyses reveal that group-mean centered perceived performance of municipality significantly interacts with participant gender in predicting the change in implicit prejudice toward female leadership. Men who attribute higher performance particularly to the municipality's strategic issues and public affairs in relative to other

colleagues in the same municipality have decreasing levels of implicit prejudice toward female leadership in exposure group, compared to control group.

4.9.Moderating Effect of Perceived Agency and Communal Characteristics of the Municipality Mayor

Another hypothesized moderator of the relationship between exposure to female leadership and implicit attitudes toward female leadership is the perceived agency and communal characteristics of the municipality mayor. I predicted that the agency and communal characteristics of female mayors would moderate the relationship between exposure and municipality context dependent stereotypic attitudes toward female leadership at Phase 2 (Hypothesis 5). The higher the level of agency as well as communal characteristics, the more likely that the exposure would predict higher automatic association between female and municipality leadership, and hence lower GL-IAT Phase 2 score controlling for Phase 1 score.

Prior to testing Hypothesis 5, I explore whether there are significant within group and between group variances in the perceived mayor communality and agency scores. I run hierarchical linear models to test whether there are any significant differences at the group level (municipality) on the mayor's perceived communality and agency indicators at Phase 2 and calculate ICCs for each indicator (Bliese, 2000; Klein et al., 2000). The results indicate significant between-group variability in mayor communality score at Phase 2, χ^2 (10, N = 11) = 135.94, $p < .001$. The 44 % of the variance in mayor communality (ICC1 = .44) can be explained by being employee of the given municipality. Moreover, mayors seem to be reliably (ICC2 = .91) differentiated in terms of their communality level. The findings are similar for the mayor agency, χ^2 (10, N = 11) = 48.12, $p < .001$, ICC1 =. 30, ICC2 = .75. Overall, these results support the aggregation of mayor communality and mayor agency scores at the municipality level. In order to capture employees' perceptions stated in the hypothesis and therefore individual level deviation from the municipality level communality and agency of mayor (i.e., Hofmann & Gavin, 1998), I center communality and agency scores for each participant at group (i.e., municipal) level. Participants with group centered communality as well as agency score higher than the median scores are given 1 and

others are assigned for 0 to create the dummy variable for "high agency-and-high communality".

To test Hypothesis 5, I specify multiple-group (exposure group versus control group) models in which GL-IAT Phase 2 is regressed on its Phase 1 measure and high agency-and-high communality. The results yield no significant effect of high agency-and-high communality and considering the critical role of participant gender in previous analyses I add interaction between gender and agency-and-high communality (Model 8a). The fit indices of Model 8a are satisfactory [$\chi^2(86) = 102.055$, $p = .114$, CFI = .97, TLI = .96, RMSEA (90% CI) = .04 (.00-.07)]. Table 4.15a reports the parameter estimates.

Table 4.15a
Unstandardized Parameter Estimates (Standard Errors) of Two-Group SEM: Perceived Mayor Agency and Communality as Predictors of GL-IAT Phase 2 Scores

Dependent variable:	Model 8a		Model 8b		Model 8c	
GL-IAT Phase 2	Exposure	Control	Exposure	Control	Exposure	Control
Intercept (constant)	-.119*	.000	-.708	.000	-.599	.000
	(.059)	(.000)	(.536)	(.000)	(.586)	(.000)
GL-IAT Phase 1	.052	.025	.168	-.032	.230†	-.090
	(.067)	(.083)	(.131)	(.090)	(.122)	(.078)
Participant gender	-.172**	-.079	-.013	-.068	.039	-.090
	(.066)	(.062)	(.093)	(.075)	(.090)	(.078)
High agency-and-high communality (1, 0)	-.121	.070	-	-	-	-
	(.092)	(.095)				
High agency-and-high communality *gender	-.460**	-.012	-	-	-	-
	(.152)	(.135)				
Mayor communality			-.021	-.055†	-	-
			(.086)	(.035)		
Group centered mayor communality			-.107	.052	-	-
			(.122)	(.040)		
Group centered mayor communality*gender			.188	.094†	-	-
			(.109)	(.050)		
Mayor agency					-.051	-.130*
					(.087)	(.057)
Group centered mayor agency					.039	.098
					(.107)	(.058)
Group centered mayor agency *gender					.184†	.010
					(.096)	(.051)

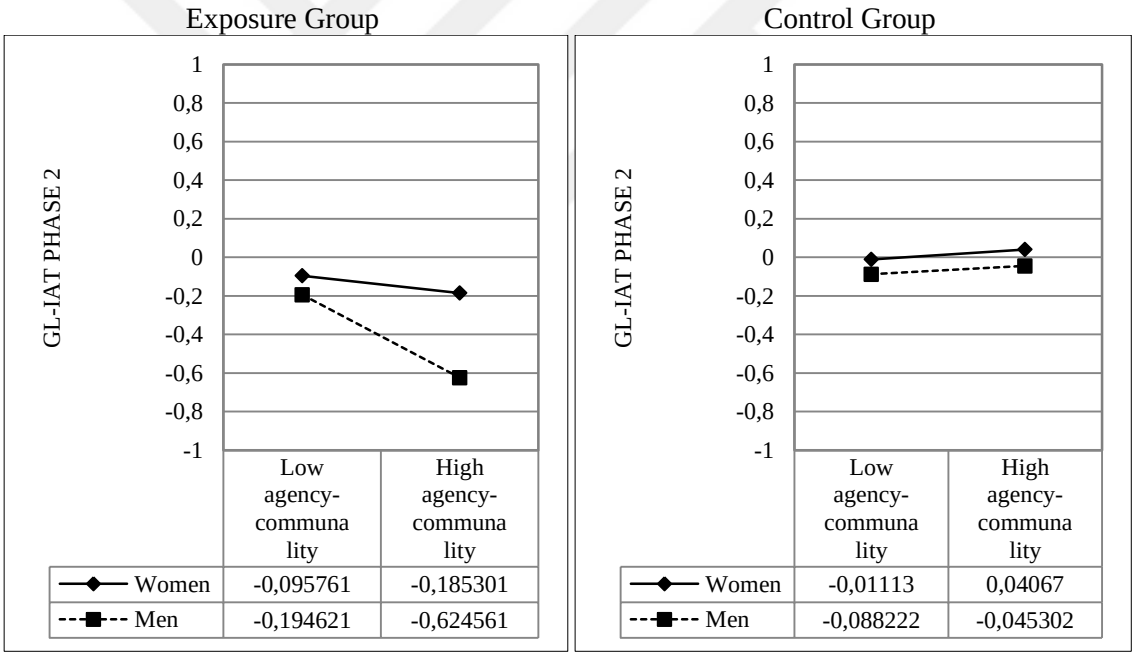
† $p = .06$. *$p < .05$. *Note*. The values represent unstandardized estimates as recommended in prior research (e.g., Bentein et al., 2005).

The results indicate that high agency-and-high communality dummy variable (Model 8a) does not significantly predict GL-IAT Phase 2 scores, yet significantly interacts with participant gender in the exposure group ($b = -.460$, $SE = .152$, $p < .01$), compared to the control group ($b = -.012$, $SE = .135$, *n.s.)*, $\Delta\chi^2$ (1) = 5.763, $p < .05$. As seen at the figure of Figure 4.2, male respondents who perceive high agency-and-high

communality of female leader had significantly lower Phase 2 score of GL-IAT in the exposure group, compared to males in the control group.

I also separately explore the moderating role of employees' perception on their mayor's communality (Model 8b) as well as their mayor's agency (Model 8c). The fit indices of the models are satisfactory for the Model 8b [χ^2 (100) = 110.011, p = .232, CFI = .96, TLI = .95, RMSEA (90% CI) = .05 (.00-.09)], and Model 8c [χ^2 (100) = 105.607, p = .331, CFI = .98, TLI = .97, RMSEA (90% CI) = .04 (.00-.09)]. The results suggest that mayor agency (Model 8c), mayor communality (Model 8b) or their interactions with participant gender do not significantly predict GL-IAT Phase 2 scores in the exposure group, controlling for Phase 1 score.

Figure 4.2.
Interactive Effect of Gender and Mayor Agency and Mayor Communality on GL-IAT



In sum, high agency-and-high communality does not predict GL-IAT by itself, but interacts with gender in shaping GL-IAT at Phase 2. Hence, these findings partially support Hypothesis 5. Male participants who attribute higher agency as well as high communality to their female mayor at Phase 2 are implicitly less stereotypical toward female leadership compared to those in the control group.

I subsequently explore the moderating roles of mayor agency, mayor communality and high agency-and-high communality variables on the relationship

between exposure and the slope of P-IAT. The slope of P-IAT is regressed on mayor agency (Model 8d), mayor communality (Model 8e), and mayor's high agency-and-high communality (Model 8f). The fit indices are satisfactory for all models: Model 8d [$\chi^2(213) = 289.939$, $p = .001$, CFI = .91, TLI = .90, RMSEA (90% CI) = .09 (.06-.11)], Model 8e [$\chi^2(213) = 254.473$, $p = .027$ CFI = .95, TLI = .94, RMSEA (90% CI) = .07 (.02-.09)], Model 8f [$\chi^2(193) = 232.892$, $p = .026$, CFI = .98, TLI = .97, RMSEA (90% CI) = .05 (.02-.07)]. Table 4.15b reports the parameter estimates.

Table 4.15b
Unstandardized Parameter Estimates (Standard Errors) of MLGM Models on P-IAT with Indicators of the Perceived Communality-Agency of Municipal Mayor

Dependent variable:	Model 8d		Model 8e		Model 8f	
Slope of P-IAT	Exposure	Control	Exposure	Control	Exposure	Control
Intercept (constant)	1.315**	-.064*	.662	-.094	-.021	-.071**
	(.457)	(.033)	(.427)	(.103)	(.041)	(.025)
Mayor agency	-.223**	.005	-	-	-	-
	(.077)	(.035)				
Group centered mayor agency	.173*	.049	-	-	-	-
	(.088)	(.035)				
Mayor communality			-.115	.016	-	-
			(.073)	(.023)		
Group centered mayor communality			.067	-.001	-	-
			(.085)	(.035)		
High agency-and-high communality (1, 0)					.001	.100
					(.069)	(.061)

*$p < .05$. *Note*. The values represent unstandardized estimates as recommended in prior research (e.g., Bentein et al., 2005).

In Model 8d, mayor agency predicts significantly negative slope of P-IAT in the exposure group ($b = -.223$, $SE = .077$, $p < .01$), but not in the control group ($b = .005$, $SE = .035$, *n.s.)*. The exposure group and the control group significantly differ on predicting the slope, $\Delta\chi^2$ (1) = 7.034, $p < .01$. Similarly, group centered mayor agency predicts significantly positive slope of P-IAT in the exposure group ($b = .173$, $SE = .088$, $p < .05$), but not in the control group ($b = .049$, $SE = .035$, *n.s.)*. However, the exposure group and the control group do not significantly differ on predicting the slope, $\Delta\chi^2$ (1) = .023, *n.s*. The analyses of other models do not yield significant results[14].

In sum, there is partial support to Hypothesis 5. High agency and high communality of female mayor do not predict the implicit stereotyping by itself, yet it interacts with participant gender in determining implicit stereotyping toward female

[14] I additionally explore whether the interaction between participant gender and mayor agency, mayor communality and high agency-and –high communality predicted the slope of P-IAT across the exposure group and the control group. The results yield no significant interaction effects with participant gender.

leadership at Phase 2. Male respondents who perceive high agency and high communality of female mayor have lower implicit stereotyping at Phase 2, controlling for Phase 1 GL-IAT measures. The exploratory analyses reveal that the findings do not yield significant effects of high agency-and-high communality on the slope of P-IAT, but leader agency predicts significantly decreasing levels of implicit prejudice in the exposure group, compared to control group. The group mean centered mayor agency, in contrast, predicts increasing levels of implicit prejudice, yet this effect does not differ across the exposure group versus the control group.

4.10. Moderating Effect of Perceived Quantity and Quality of Interaction

The perceived quantity and quality of interaction with the mayor were proposed to moderate the potential influence of exposure to female leadership and implicit attitudes toward female leadership. I predicted that frequent (Hypothesis 6a) and high quality (Hypothesis 6b) interactions with female mayor would moderate the relation between exposure and context dependent implicit stereotypic attitudes toward female leadership (at Phase 2). The more frequent and high quality the interaction with female mayor are, the higher would be the positive relation between automatic association between exposure and automatic association between female and context dependent leadership. I further hypothesized that high quality interactions with a female mayor (Hypothesis 6c) would moderate the relation between exposure and generalized implicit prejudicial attitudes toward female leadership. The more frequent and high quality the interaction with female mayor are, the higher would be the positive relation between automatic association between exposure and automatic association between female leadership-positive cues.

I conduct a series of multiple group (exposure vs. control) SEM to examine the moderating effect of quantity and quality of interactions on the implicit stereotyping as well as multiple group (exposure vs. control) MLGM to investigate their moderating effect on the relationship between exposure and implicit prejudice.

4.10.1. Moderating effect of the quantity of interaction on GL-IAT

In order to test Hypothesis 6a, I, first, examine the moderating effects of quantity of interaction in general (Model 9a), the quantity of distant interaction (Model 9b) and the quantity of close interactions (Model 9c) and explore their interactions with participant gender. Fit indices are satisfactory for Model 9a [$\chi^2(86) = 107.657$, $p = .057$, CFI = .92, TLI = .91, RMSEA (90% CI) = .07 (.00-.11)], for Model 9b [$\chi^2(86) = 104.688$, $p = .083$, CFI = .93, TLI = .92, RMSEA (90% CI) = .06 (.00-.10)] and for Model 9c [$\chi^2(86) = 113.965$, $p = .024$, CFI = .90, TLI = .90, RMSEA (90% CI) = .08 (.03-.11)]. Table 4.16a shows the estimates of three models.

Table 4.16a

Unstandardized Parameter Estimates (Standard Errors) of Two-Group SEM: Quantity of Interaction as Predictors of GL-IAT Phase 2 Scores

Dependent variable:	Model 9a		Model 9b		Model 9c	
GL-IAT Phase 2	Exposure	Control	Exposure	Control	Exposure	Control
Intercept (constant)	.012	.000	-.001	.000	.002	.000
	(.090)	(.000)	(.103)	(.000)	(.100)	(.000)
GL-IAT Phase 1	.094	.058	.102	.065	.117	.050
	(.125)	(.103)	(.133)	(.103)	(.118)	(.101)
Participant gender	-.224*	-.056	-.260*	-.045	-.138	-.055
	(.104)	(.102)	(.125)	(.108)	(.078)	(.084)
Quantity	-.055*	-.030	-	-	-	-
	(.027)	(.034)				
Quantity*gender	.131**	-.006	-	-	-	-
	(.046)	(.049)				
Quantity-distant			-.023	.031	-	-
			(.023)	(.026)		
Quantity-distant*gender			.094*	-.015	-	-
			(.040)	(.036)		
Quantity-close					-.074**	.006
					(.027)	(.036)
Quantity-close*gender					.141**	.002
					(.044)	(.055)

*$p < .05$. **$p < .01$. *Note*. The values represent unstandardized estimates as recommended in prior research (e.g., Bentein et al., 2005).

The estimations reveal similar results in Model9a, Model 9b and Model 9c. In Model 9a, controlling for Phase 1 GL-IAT scores, the overall quantity of interaction with mayor predicts significantly lower GL-IAT Phase 2 score in the exposure group ($b = -.055$, $SE = .027$, $p < .05$), but not in the control group ($b = -.030$, $SE = .034$, *n.s.*).

This supports Hypothesis 6a, except the exposure group and the control group do not significantly differ on the quantity of interaction's main effect of implicit stereotyping across the exposure group versus the control group, $\Delta\chi^2$ (1) = .610, *n.s.* The quantity of

interaction interact with participant gender in predicting significantly higher GL-IAT Phase 2 score in the exposure group (b = .131, SE = .046, p < .01), compared to the control group (b = -.006, SE = .049, *n.s.*), $\Delta\chi^2$ (1) = 4.410, p < .05. As shown at Figure 4.3, this indicates that males who have more frequent interaction with their female mayor have higher implicit stereotyping toward female leadership.

In Model 9b, controlling for Phase 1 GL-IAT scores, the quantity of distant communication interacts with being male in predicting significantly higher GL-IAT Phase 2 score in the exposure group (b = .094, SE = .040, p < .05), compared to the control group (b = -.015, SE = .036, *n.s.*), $\Delta\chi^2$ (1) = 4.376, p < .05. Males who have more frequent and distant interaction with their female mayor have higher implicit stereotyping toward female leadership at Phase 2 (see, Figure 4.3).

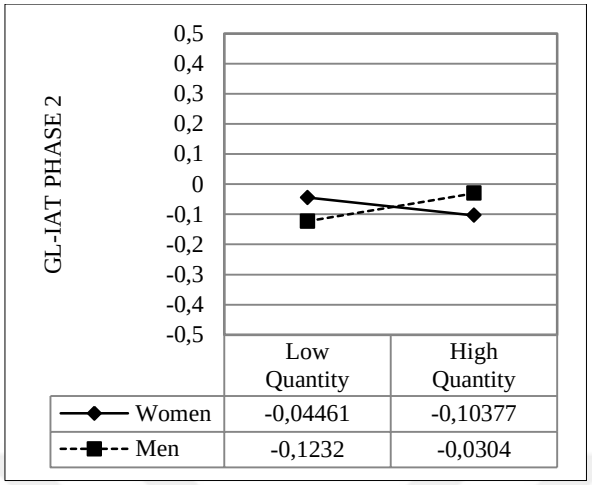
In Model 9c, controlling for Phase 1 GL-IAT scores, the quantity of close interaction with mayor predicts significantly lower GL-IAT Phase 2 score in the exposure group (b = -.074, SE = .027, p < .01), compared to the control group (b = .006, SE = .036, *n.s.*), $\Delta\chi^2$ (1) = 3.976, p < .05. Similar to other indicators, it interacts with being male in predicting significantly higher GL-IAT Phase 2 score in the exposure group (b = .141, SE = .044, p < .01), compared to the control group (b = .002, SE = .055, *n.s.*), $\Delta\chi^2$ (1) = 4.610, p < .05. As shown at Figure 4.3, males who have more frequent close interaction with female mayor have higher implicit stereotyping toward female leadership, whereas female employees who have frequent close interaction have lower implicit stereotyping toward female leadership.

Overall, the quantity of close interaction with female mayor predicts lower implicit stereotyping at Phase 2, controlling for Phase 1 measure of stereotyping, supporting Hypothesis 6a. I explore the interactions with participant gender and find that male participants who have more frequent interaction with their female mayor have higher implicit stereotyping, whereas female counterparts have lower implicit stereotyping toward female leadership.

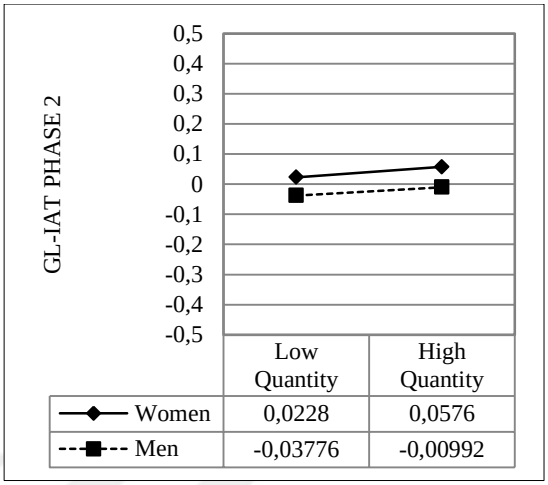
Figure 4.3

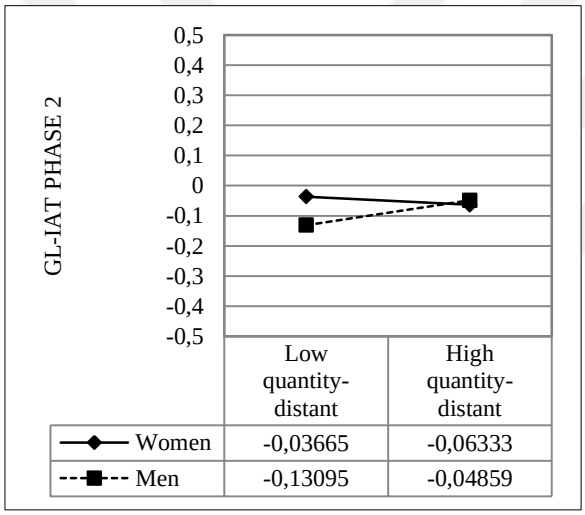
Interactive Effect of Participant Gender and Quantity of Interaction on GL-IAT Phase 2

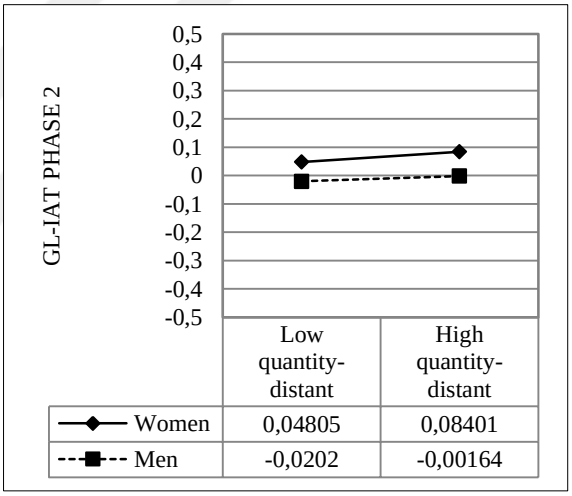
Exposure group

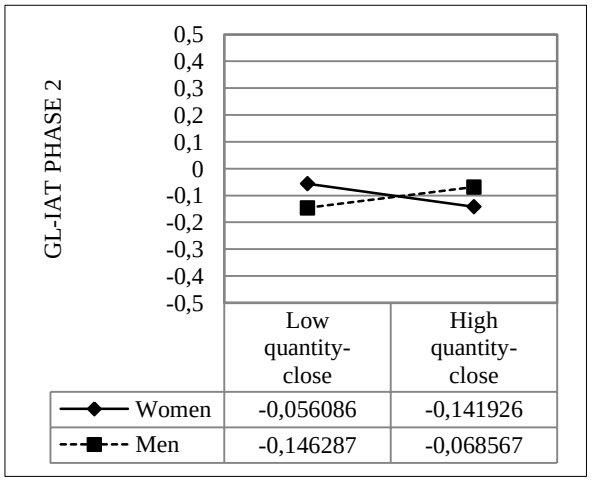


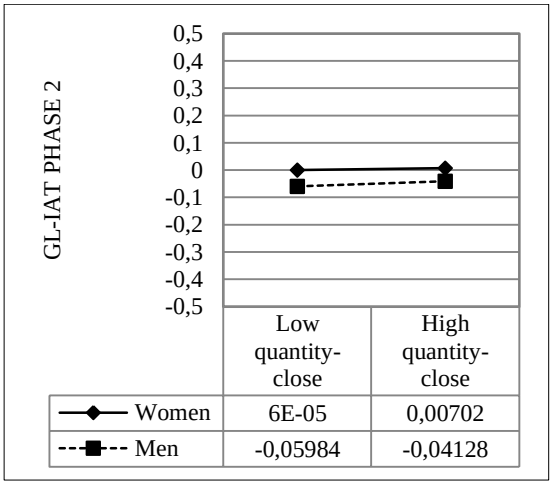
Control group











4.10.2. Moderating effect of the quality of interaction on GL-IAT

In order to test Hypothesis 6b, I examine the moderating effects of quality of interaction (Model 9d), affective component of LMX (Model 9e), professional respect LMX (Model 9f) and interactional justice of the mayor (Model 9g). The fit indices are satisfactory for all models: Model 9d [$\chi^2(86) = 104.130$, $p = .089$, CFI = .93, TLI = .92, RMSEA (90% CI) = .06 (.00-.10)], Model 9e [$\chi^2(86) = 103.222$, $p = .100$, CFI = .94, TLI = .93, RMSEA (90% CI) = .06 (.00-.10)], Model 9f [$\chi^2(86) = 115.670$, $p = .022$, CFI = .90, TLI = .90, RMSEA (90% CI) = .08 (.03-.11)], and Model 9g [$\chi^2(86) = 102.762$, $p = .105$, CFI = .94, TLI = .92, RMSEA (90% CI) = .06 (.00-.10)]. Table 4.16b shows the parameter estimates.

As shown at Table 4.16b, the estimates of Model 9f and Model 9g are not significant. Professional respect dimension of LMX (Model 9f), interactional justice (Model 9h) and their interaction with participant gender in these two models do not significantly predict Phase 2 score of GL-IAT. In Model 9d, controlling for Phase 1 GL-IAT scores, overall quality of interaction with the mayor does not predict GL-IAT Phase 2 score in the exposure group ($b = -.084$, $SE = .055$, *n.s.*), or in the control group ($b = -.030$, $SE = .043$, *n.s.*). Yet, the quality of interaction significantly interacts with participant gender in predicting GL-IAT Phase 2 score in the exposure group ($b = .220$, $SE = .103$, $p < .05$), but not in the control group ($b = .021$, $SE = .062$, *n.s.*). However, the exposure group and the control group do not significantly differ on such an interaction effect, $\Delta\chi^2 (1) = 2.977$, *n.s.*

In Model 9e, controlling for Phase 1 GL-IAT scores, the affective component of LMX predicts significantly lower GL-IAT Phase 2 score in the exposure group ($b = -.107$, $SE = .050$, $p < .05$), but this effect does not significantly differ from the control group, $\Delta\chi^2 (1) = 1.208$, *n.s*. The LMX-affect interacts with being male in predicting significantly higher GL-IAT Phase 2 score in the exposure group ($b = .231$, $SE = .094$, $p < .05$), compared to the control group ($b = .027$, $SE = .059$, *n.s.*), $\Delta\chi^2 (1) = 3.979$, $p < .05$. As illustrated at Figure 4.4, male (female) respondents who perceive higher affective LMX with their female mayor tend to have higher (lower) implicit level stereotypic attitudes toward female leadership at Phase 2, controlling for Phase 1 measure.

Table 4.16b

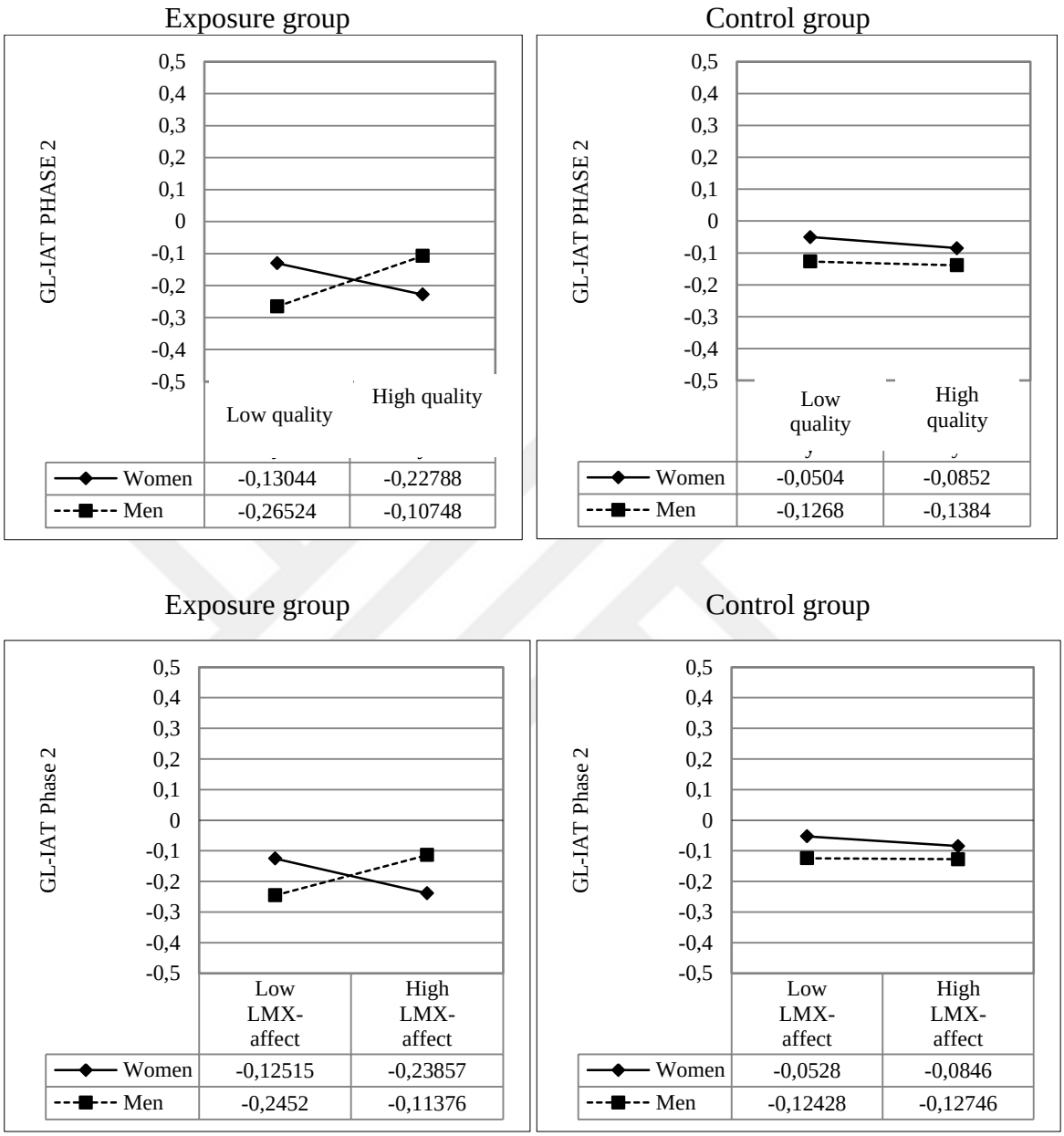
Unstandardized Parameter Estimates (Standard Errors) of Moderating Effect of the Quality of Interaction on GL-IAT

Dependent variable:	Model 9d		Model 9e		Model 9f		Model 9g	
GL-IAT Phase 2	Exposure	Control	Exposure	Control	Exposure	Control	Exposure	Control
Intercept (constant)	.002 (.085)	.000 (.000)	.001 (.094)	.000 (.000)	-.001 (.080)	.000 (.000)	-.003 (.102)	.000 (.000)
GL-IAT Phase 1	.125 (.114)	.10 (.096)	.070 (.101)	.017 (.093)	.088 (.101)	.021 (.103)	.126 (.119)	-.004 (.102)
Participant gender	-.665* (.320)	-.110 (.156)	-.686* (.289)	-.119 (.150)	-.193 (.170)	-.215 (.148)	-.470 (.336)	-.113 (.130)
Quality	-.084 (.055)	-.030 (.043)	-	-	-	-	-	-
Quality* gender	.220* (.103)	.021 (.062)	-	-	-	-	-	-
LMX-affect	-	-	-.107* (.050)	-.030 (.041)	-	-	-	-
LMX-affect* gender	-	-	.231* (.094)	.027 (.059)	-	-	-	-
LMX-prof.	-	-	-	-	-.026 (.040)	-.052 (.039)	-	-
LMX-prof.* gender	-	-	-	-	.068 (.052)	.067 (.050)	-	-
IJ	-	-	-	-	-	-	-.057 (.053)	-.037 (.038)
IJ*gender	-	-	-	-	-	-	.147 (103)	.020 (.054)

*$p < .05$. *Note*. The values represent unstandardized estimates as recommended in prior research (e.g., Bentein et al., 2005). LMX-affect: Leader-member exchange, affect sub-scale score; LMX-prof: Leader-member exchange professional respect sub-scale; IJ: Perceived interactional justice of mayor. The quality of interaction was measured as composite score of LMX-affect, LMX-professional and IJ observed scores.

Taken together, the overall quality of interaction with the mayor and the quality of affective leader-member exchange significantly predict lower implicit stereotyping attitudes toward female leadership at Phase 2 in the exposure group. However, the exposure group and the control group significantly differ on implicit stereotyping at Phase 2 for only the interactive effect of LMX-affect and being male, partially supporting Hypothesis 6b. Female respondents who perceive higher affective LMX with their female mayor tend to have lower implicit stereotyping at Phase 2, controlling for Phase 1 measure.

Figure 4.4.
Interactive Effect of Participant Gender and Quality of Interaction on GL-IAT



4.10.3. Moderating effect of the quality of interaction on the slope of P-IAT

In order to test Hypothesis 6c, I examine the moderating effect of the interaction quality in general (Model 10d), affective dimension of LMX (Model 10e), professional respect dimension of LMX (Model 10f), and the interactional justice (Model 10g) on the slope of P-IAT. The fit indices are satisfactory for all models: Model 10d [$\chi^2(233) = 299.192$, $p = .002$, CFI = .93, TLI = .92, RMSEA (90% CI) = .07 (.05-.10)], Model 10e

[χ^2(233) = 284.910, p = .011, CFI = .94, TLI = .94, RMSEA (90% CI) = .06 (.03-.09)], Model 10f [χ^2(233) = 299.442, p = .002, CFI = .93, TLI = .92, RMSEA (90% CI) = .07 (.05-.10)], and Model 10g [χ^2(233) = 298.659, p = .002, CFI = .93, TLI = .92, RMSEA (90% CI) = .07 (.05-.10)]. Table 4.17 shows the parameter estimates of the models.

Table 4.17
Unstandardized Parameter Estimates (Standard Errors) of MLGM Models on P-IAT with Quality of Interaction as Covariates

Dependent variable:	Model 10d		Model 10e		Model 10f		Model 10g	
Slope of P-IAT	Exposure	Control	Exposure	Control	Exposure	Control	Exposure	Control
Intercept (constant)	.362* (.155)	-.094 (.068)	.212 (.142)	-.115† (.062)	.181 (.115)	-.114 (.065)	.262 (.152)	-.104 (.060)
Gender	-.041 (.082)	. 035 (.064)	-.007 (.065)	-.039 (.089)	.050 (.086)	-.011 (.069)	-.034 (.080)	.045 (.062)
Quality	-.141** (.048)	.021 (.027)	-	-	-	-	-	-
LMX-affect	-	-	-.090* (.042)	.042 (.024)	-	-	-	-
LMX-prof.	-	-	-	-	-.093** (.036)	.040 (.026)	-	-
IJ	-	-	-	-	-	-	-.100* (.043)	.022 (.022)

† p < .06. *p < .05. **p < .01. *Note*. The values represent unstandardized estimates as recommended in prior research (e.g., Bentein et al., 2005). LMX-affect: Leader-member exchange affect sub-scale score; LMX-prof: Leader-member exchange professional respect sub-scale; IJ: Perceived interactional justice of mayor. The quality of interaction was a composite score of LMX-affect, LMX-professional and IJ observed scores.

In Model 10d, the interaction between Phase 2 score of GL-IAT and the quality of interaction is not significant across groups. However, the quality of interaction with the mayor predicts significantly negative slope of P-IAT in the exposure group (b = -.141, SE = .048, p <.01), compared to the control group (b =.021, SE = .027, *n.s.*), $\Delta\chi^2$ (1) = 8.635, p < .001. That is, employees' high quality relationship with their female mayor predicts decreasing implicit prejudice toward female leadership, compared to the control group, as suggested by Hypothesis 6c. Similarly, the indicators of the interaction quality – i.e., LMX-affect (Model 10e), LMX-professional respect (Model 10f) and interactional justice (Model 10g) - predict significantly negative slope of P-IAT in the exposure group, but not in the control group.

In Model 10e, the likelihood ratio test reveals significant group difference when equality constraint put on LMX-affect across the exposure group (b = -.090, SE = .042,

$p < .05$) versus the control group ($b = .042$, $SE = .024$, *n.s.*), $\Delta\chi^2$ (1) = 7.146, $p < .001$. In Model 10f, the likelihood ratio test reveals significant group difference when equality constraint put on LMX-profession across the exposure group ($b = -.093$, $SE = .036$, $p < .01$) versus the control group ($b = .040$, $SE = .026$, *n.s.*), $\Delta\chi^2$ (1) = 8.994, $p < .001$. Yet, in Model 10g, the likelihood ratio test reveals non-significant group difference when equality constraint put on IJ across the exposure group versus the control group, $\Delta\chi^2$ (1) = 3.363, *n.s.*

I explore the interaction of participant gender and the indicators of quality of interaction with the mayor. The results yield that being male significantly interacted with only LMX-profession in predicting the slope of P-IAT in the exposure group, χ^2 (233) = 281.422, $p = .016$, CFI = .95, TLI = .94, RMSEA (90% CI) = .06 (.03-.09). Males who perceive higher LMX-profession in the exposure group ($b = -.162$, $SE = .076$, $p < .05$) have significantly negative slope of P-IAT. Yet, the comparison of the exposure group and the control group ($b = -.069$, $SE = .046$, *n.s.*) does not reach significant level, $\Delta\chi^2$ (1) = 1.106, *n.s.*

Overall, these results suggest that the quality of interaction and particularly LMX indicators significantly moderate the relationship between exposure and change in implicit prejudice toward female leadership, supporting Hypothesis 6c. The perceived affective interaction with the female mayor (Model 10e) and professional respect toward the female mayor (Model 10f) significantly predict decreasing levels of implicit prejudice toward female leadership in the exposure group, compared to the control group.

4.11. Moderating Effect of Participants' Sex Role and Gender

I, lastly, predicted that high gender identifier employees would have weaker association between exposure to female mayor and context dependent implicit stereotyping at Phase 2 (Hypothesis 7a) as well as the association between exposure and generalized implicit prejudice (Hypothesis 7b).

4.11.1. Moderating effect of sex role on the relationship between exposure to female leadership and implicit stereotyping

To test Hypothesis 7a, I specify two-group SEMs on GL-IAT Phase 2 score with participant sex role indicators and their gender as predictors. Table 4.18a reports the parameter estimates of the relevant models (Model 14a, Model 14b & Model 14c). As a further test of Hypothesis 7a, I examine the sex role indicators for each gender group separately (Model 14d to Model 14f for males; Model 14g to Model 14i for females). Table 4.18b demonstrates the parameter estimates of these six models for each gender group.

Table 4.18a
Unstandardized Parameter Estimates (Standard Errors) of Two-Group SEM on GL-IAT, Participant Sex Role and Gender as Predictors

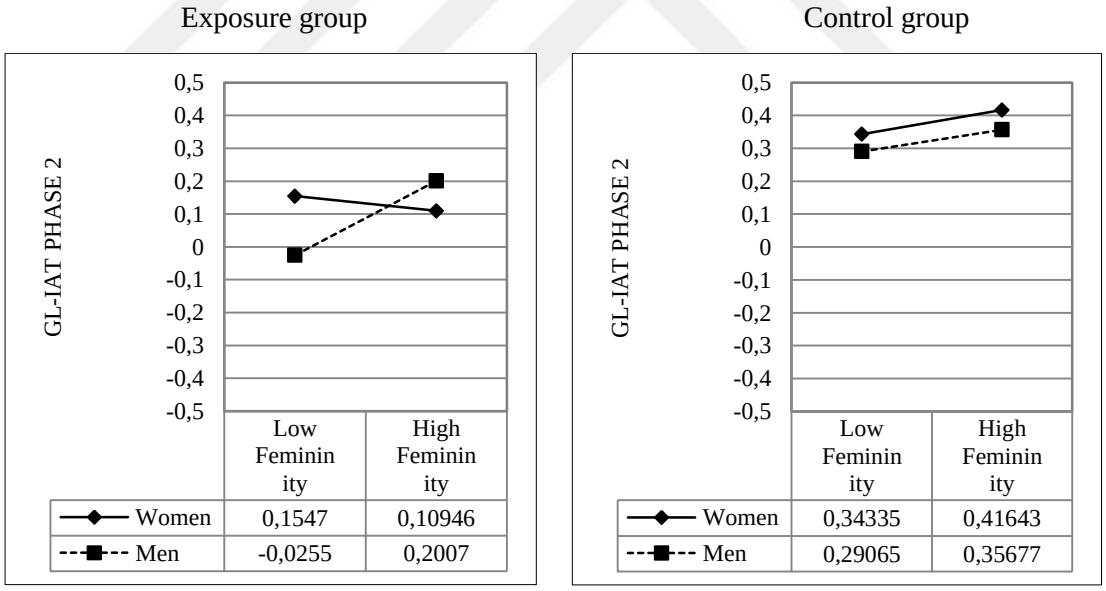
Dependent variable:	Model 14a		Model 14b		Model 14c	
GL-IAT Phase 2	Exposure	Control	Exposure	Control	Exposure	Control
Intercept (constant)	.394	.000	.377	.000	-.374	.000
	(.521)	(.000)	(.516)	(.000)	(.400)	(.000)
GL-IAT Phase 1	.047	.033	.052	.029	.084	.033
	(.076)	(.076)	(.077)	(.076)	(.077)	(.076)
Femininity	-.061	.054	-.039	.063*	.098	.060*
	(.088)	(.032)	(.082)	(.029)	(.058)	(.026)
Masculinity	-.006	-.036	-.030	-.049*	-.046	-.040
	(.045)	(.027)	(.033)	(.023)	(.043)	(.025)
Participant Gender	-.105	-.061	-1.514*	-.020	-.173	.114
	(.069)	(.053)	(.701)	(.258)	(.348)	(.216)
Femininity *Gender	.275*	.019	.234*	-.006	-	-
	(.125)	(.052)	(.110)	(.043)		
Masculinity *Gender	-.053	-.040	-	-	.024	-.031
	(.068)	(.046)			(.060)	(.039)

*$p < .05$. **$p < .01$. *Note*. The values represent unstandardized estimates as recommended in prior research (e.g., Bentein et al., 2005).

In Model 14a, Phase 2 score of GL-IAT is regressed on its Phase 1 measure, participant femininity, their masculinity, gender as well as the interactions among gender and sex role orientations. The fit indices of the model are reasonable, $\chi^2(114) = 163.843$, $p = .002$, CFI = .90, TLI = .90, RMSEA (90% CI) = .07 (.04-.09). The interaction between femininity and being male significantly predicts Phase 2 score of GL-IAT in the exposure group ($b = .275$, $SE = .125$, $p < .05$), compared to the control group ($b = .019$, $SE = .052$, *n.s.*), $\Delta\chi^2 (1) = 4.115$, $p < .05$. This indicates that males who have higher femininity orientation have higher implicit stereotyping at Phase 2, controlling for Phase 1 measure.

In Model 14b, Phase 2 score of GL-IAT is regressed on its Phase 1 measure, sex role indicators, participant gender and only the interaction between femininity and gender. The fit indices of Model 14b are reasonable, $\chi^2(100) = 134.702$, $p = .012$, CFI = .92, TLI = .91, RMSEA (90% CI) = .06 (.03-.08). Model estimates show that femininity significantly predicts lower GL-IAT Phase 2 in the control group, but it does not significantly differ from the estimates of the exposure group, $\Delta\chi^2(1) = 3.350$, *n.s.* On the other hand, as indicated in Model 14a, the femininity level and being male significantly interact in predicting higher Phase 2 score of GL-IAT in the exposure group ($b = .234$, $SE = .110$, $p < .05$), compared to the control group ($b = -.006$, $SE = .043$, *n.s.*), $\Delta\chi^2 (1) = 4.770$, $p < .05$. The interactive effect for the exposure group is illustrated at Figure 4.5. Men who have higher feminine sex role orientation have higher implicit stereotyping in the exposure group, compared to those with lower feminine sex role identity.

Figure 4.5.
Interactive Effect of Participant Gender and Gender Role Identity on GL-IAT



In Model 14c, Phase 2 score of GL-IAT is regressed on its Phase 1 measure, sex role indicators, gender and only the interaction between masculinity and gender. The fit indices of Model 14c are reasonable, $\chi^2(100) = 134.755$, $p = .012$, CFI = .92, TLI = .91, RMSEA (90% CI) = .06 (.03-.08). Model estimates show that femininity significantly predict higher GL-IAT Phase 2 in the control group ($b = .060$, $SE = .026$, $p < .05$), but not in the exposure group ($b = .098$, $SE = .058$, *n.s.*). Yet, the group difference is not significant, $\Delta\chi^2(1) = .606$, *n.s.* The masculinity and gender do not significantly predict

Phase 2 score of GL-IAT in the exposure group. Taken together, in contrast to Hypothesis 7a, rather than high identification with one's sex role, male respondents' femininity seems to predict higher implicit stereotyping toward female leadership at Phase 2.

I explore whether the femininity and masculinity sex role orientations (Model 14d & Model 14g), being high gender identifier as a dummy variable (Model 14e & Model 14h) and being androgynous as a dummy variable (Model 14f & Model 14i) would predict GL-IAT for each gender group (see, Table 4.18b). The fit indices are reasonable for Model 14d, $\chi^2(72) = 88.225$, $p = .094$, CFI = .93, TLI = .92, RMSEA (90% CI) = .07 (.00-.12); Model 14e, $\chi^2(58) = 66.552$, $p = .206$, CFI = .96, TLI = .95, RMSEA (90% CI) = .06 (.00-.11); Model 14f, $\chi^2(58) = 72.145$, $p = .100$, CFI = .92, TLI = .90, RMSEA (90% CI) = .09 (.00-.15); Model 14g, $\chi^2(72) = 102.258$, $p = .011$, CFI = .90, TLI = .89, RMSEA (90% CI) = .09 (.05-.13); Model 14h, $\chi^2(58) = 88.032$, $p = .007$, CFI = .90, TLI = .89, RMSEA (90% CI) = .09 (.05-.14); and Model 14i, $\chi^2(58) = 85.796$, $p = .010$, CFI = .90, TLI = .89, RMSEA (90% CI) = .09 (.06-.12).In Model 14d, the findings are similar to Model 14a and Model 14b: male respondents who have higher femininity orientation ($b = .249$, $SE = .095$, $p < .01$) report higher implicit stereotyping toward female leadership compared to males in the control group ($b = .074$, $SE = .043$, *n.s.*), $\Delta\chi^2(1) = 4.879$, $p < .05$. Furthermore, males with higher masculinity do not significantly predict implicit stereotyping in the exposure group ($b = -.076$, $SE = .062$, *n.s.*), but significantly predict lower implicit stereotyping in the control group ($b = -.099$, $SE = .041$, $p < .05$). However, there is no significant group difference between the exposure group and the control group, $\Delta\chi^2(1)$ .091, *n.s.* The findings of other models suggest that being high gender identifier does not significantly predict Phase 2 score of GL-IAT neither in the exposure group nor in the control group for males (Model 14e) as well as females (Model 14h). Similarly, the androgyny does not significantly predict Phase 2 score of GL-IAT neither in the exposure group nor in the control group for males (Model 14f) as well as females (Model 14i).

Overall, these findings refute Hypothesis 7a. Being high identifier is not found as significant predictor of implicit stereotyping in neither group. However, in contrast to Hypothesis 7a, men who score higher at femininity have higher implicit stereotyping toward female leadership in the exposure group, compared to the control group males with low femininity orientation.

Table 4.18b

Unstandardized Parameter Estimates (Standard Errors) of GL-IAT with Participant Sex Role as Covariates for Each Gender Group

Dependent variable:	Male Participants						Female participants					
GL-IAT Phase 2	Model 14d		Model 14e		Model 14f		Model 14g		Model 14h		Model 14i	
	Exposure	Control	Exposure	Control	Exposure	Control	Exposure	Control	Exposure	Control	Exposure	Control
Intercept (constant)	-1.415*	.000	-.266*	.000	-.071	.000	.149	.000	-.054	.000	-.133	.000
	(.577)	(.000)	(.103)	(.000)	(.083)	(.000)	(.403)	(.000)	(.057)	(.000)	(.088)	(.000)
GL-IAT Phase 1	.001	.268	.061	.257	.137	.600*	.129	-.137	.123	-.142	.133	-.186
	(.138)	(.134)	(.144)	(.142)	(.131)	(.276)	(.126)	(.090)	(.101)	(.101)	(.116)	(.146)
Femininity	.249**	.074	-	-	-	-	-.008	.047	-	-	-	-
	(.095)	(.043)					(.065)	(.034)				
Masculinity	-.076	-.099*	-	-	-	-	-.018	-.030	-	-	-	-
	(.062)	(.041)					(.033)	(.025)				
High identifier (1, 0)	-	-	.104	-.060	-	-	-	-	-.047	.059	-	-
			(.112)	(.093)					(.085)	(.066)		
Androgyny (1, 0)	-	-	-	-	.024	.078	-	-	-	-	.007	-.097
					(.096)	(.116)					(.063)	(.108)

*$p < .05$. **$p < .01$. *Note*. The values represent unstandardized estimates as recommended in prior research (e.g., Bentein et al., 2005).

4.11.2. Moderating effect of sex role on the relationship between exposure to female leadership and implicit prejudice

To test Hypothesis 7b, first, the slope of P-IAT is regressed on the femininity and masculinity orientations of respondents and their gender across exposure and control groups (Model 15a, Model 15b & Model 15c). Table 4.19 reports the parameter estimates. Second, the slope of P-IAT of males and the slope of females are separately regressed on the feminine-masculine orientations (Model 15d & Model 15g), being high gender identifier (Model 15e & Model 15h), and the androgyny (Model 15f & Model 15i). Table 4.19b shows latter model's parameter estimates.

In Model 15a, the slope of P-IAT is regressed on participant femininity, participant masculinity, participant gender and the interactions among sex role indicators and gender. The fit indices of the model are good, χ^2 (233) = 294.884, p = .004, CFI = .96, TLI = .96, RMSEA (90% CI) = .05 (.03-.07). The results indicate no significant main effect or interaction effect of sex role indicators.

Table 4.19a
Unstandardized Parameter Estimates (Standard Errors) of MLGM Models on P-IAT with Participant Sex Role and Gender as Covariates

Dependent variable:	Model 15a		Model 15b		Model 15c	
Slope of P-IAT	Exposure	Control	Exposure	Control	Exposure	Control
Intercept (constant)	-.204	.048	-.203	.025	.095	-.018
	(.505)	(.152)	(.505)	(.150)	(.377)	(.128)
Femininity	-.030	-.005	-.030	.004	-.088	.005
	(.087)	(.029)	(.084)	(.027)	(.057)	(.022)
Masculinity	.074	.006	.074*	.001	.087*	.006
	(.047)	(.026)	(.036)	(.021)	(.043)	(.024)
Gender	.523	-.238	.522	-.139	-.117	-.106*
	(.729)	(.292)	(.660)	(.249)	(.065)	(.054)
Femininity *Gender	-.102	.015	-.101	-.001	-	-
	(.115)	(.048)	(.104)	(.041)		
Masculinity * Gender	.001	-.019	-	-	-.028	-.018
	(.072)	(.043)			(.065)	(.036)

*p < .05. **p < .01. *Note*. The values represent unstandardized estimates as recommended in prior research (e.g., Bentein et al., 2005).

In Model 15b, the slope of P-IAT is regressed on participant femininity, participant masculinity, participant gender and the interaction between femininity and gender. The fit indices of Model 15b are good, χ^2(213) = 266.920, p = .007, CFI = .97, TLI = .97, RMSEA (90% CI) = .05 (.03-.07). Model estimates show that

masculinity significantly predicted higher P-IAT in the exposure group, but not in the control group. Yet, the group difference is not significant, $\Delta\chi^2$ (1) = 3.209, *n.s.*

In Model 15c, the slope of P-IAT is regressed on participant femininity, participant masculinity, participant gender and the interaction between masculinity and gender. The fit indices of Model 15c are good, χ^2 (213) = 279.789, p = .001, CFI = .96, TLI = .96, RMSEA (90% CI) = .06 (.04-.08). Similar to Model 15b, masculinity significantly predicts higher P-IAT in the exposure group, but not in the control group and the group difference is not significant, $\Delta\chi^2$ (1) = 2.523, *n.s.*

As mentioned before, additional models are specified for each gender group to explore whether the femininity and masculinity sex role orientations (Model 15d & Model 15g), being high gender identifier (Model 15e & Model 15h) and being androgynous (Model 15f & Model 15i) would predict GL-IAT (see, Table 4.19b).

Table 4.19b
Unstandardized Parameter Estimates (Standard Errors) of MLGM Models on P-IAT with Participant Sex Role as Covariates for Each Gender Group

Dependent variable: Slope of P-IAT	Male Participants					
	Model 15d		Model 15e		Model 15f	
	Exposure	Control	Exposure	Control	Exposure	Control
Intercept (constant)	.311	-.060	-.086	.012	-.087	.019
	(.492)	(.137)	(.071)	(.035)	(.085)	(.044)
Femininity	-.134	.005	-	-	-	-
	(.085)	(.035)				
Masculinity	.076	-.016	-	-	-	-
	(.062)	(.034)				
High identifier (1, 0)	-	-	.016	-.106	-	-
			(.100)	(.074)		
Androgyny (1, 0)	-	-	-	-	.003	-.106
					(.110)	(.090)
Dependent variable: Slope of P-IAT	Female participants					
	Model 15g		Model 15h		Model 15i	
	Exposure	Control	Exposure	Control	Exposure	Control
Intercept (constant)	-.161	.087	.007	-.138	.042	-.141***
	(.429)	(.181)	(.068)	(.047)	(.054)	(.040)
Femininity	-.032	-.009	-	-	-	-
	(.074)	(.032)				
Masculinity	.070	.007	-	-	-	-
	(.040)	(.026)				
High identifier (1, 0)	-	-	.032	.117	-	-
			(.077)	(.076)		
Androgyny (1, 0)	-	-	-	-	-.010	.069
					(.033)	(.039)

***p < .001. *Note*. The values represent unstandardized estimates as recommended in prior research (e.g., Bentein et al., 2005).

The fit indices are reasonable for all models: Model 15d, $\chi^2(173) = 219.251$, $p = .010$, CFI = .93, TLI = .93, RMSEA (90% CI) = .08 (.04-.11), Model 15e $\chi^2(153) = 189.906$, $p = .023$, CFI = .94, TLI = .94, RMSEA (90% CI) = .07 (.03-.10); Model 15f $\chi^2(153) = 208.452$, $p = .002$, CFI = .90, TLI = .89, RMSEA (90% CI) = .09 (.07-.13); Model 15g $\chi^2(173) = 219.608$, $p = .010$, CFI = .91, TLI = .91, RMSEA (90% CI) = .08 (.04-.10); Model 15h $\chi^2(153) = 214.524$, $p = .001$, CFI = .90, TLI = .89, RMSEA (90% CI) = .09 (.06-.12); Model 15i $\chi^2(153) = 225.306$, $p < .001$, CFI = .89, TLI = .89, RMSEA (90% CI) = .09 (.07-.12).

The results indicate that the femininity and masculinity orientations of males (Model 15d) and females (Model 15g) do not significantly predict the change trajectory of implicit prejudice toward female leadership. Being high gender identifier does not predict any change in implicit prejudice for males (Model 15e) and for females (Model 15h). Being androgynous, similarly, does not predict the slope of implicit prejudice measures for males (Model 15f) and for females (Model 15i).

Overall, these findings refute Hypothesis 7b. The feminine or masculine orientations of participants and being high identifier are not significantly related with the trajectory of implicit prejudice toward female leadership.

5.

DISCUSSION

The present study inquires the malleability of employees' implicit attitudes toward female leadership. To my knowledge, this is the first study to examine change in implicit stereotyping and implicit prejudice towards female leadership at work. It is also one of the first organizational studies to test the diverging theoretical perspectives such as intergroup contact theory, APE model and backlash arguments on the malleability of implicit stereotypes and implicit prejudice toward female leadership.

It contributes to the leadership literature by investigating the unfolding patterns of employees' context dependent implicit stereotyping and implicit prejudice toward female leadership following exposure to a woman leader at top position. First, it examined whether employees' implicit stereotyping toward female leadership in their organizational context changes following exposure to a female top manager (i.e., municipality mayor). Second, it investigated the extent and type of change trajectories of implicit prejudice toward female leadership in general following such an exposure. Third, it examined whether a) leader characteristics (i.e., perceived success and perceived agency –and-communality), b) employee characteristics (i.e., gender and gender identity) and c) the perceived interaction between the leader and employee (i.e., the quantity and quality of interaction) shape the change in implicit attitudes toward female leadership.

I tested these inquiries in a three-wave longitudinal field setting. I repeatedly measure employees' implicit attitudes for three times with three-month time intervals. In the following sections, I first summarize hypotheses and the research findings (see, Table 5.1). Then, I discuss the theoretical as well as practical implications of these findings, the limitations of the study and the recommendations for future research.

Table 5.1.
Summary of Research Questions and Findings of Hypotheses Testing

Hypotheses	Results	Explanation
H1a. At Phase 1, employees who are exposed to a female municipality mayor (the exposure group) will have lower levels of context dependent implicit stereotypic attitudes toward female leadership relative to the control group.	Refuted	Participants in the exposure group and those in the control group do not have significantly different levels of implicit stereotyping at Phase 1. Albeit the first hypothesis is refuted, this finding indicate that the level of implicit stereotyping of two groups do not differ at the beginning of data collection. Furthermore, in contrast to Hypothesis 1b, controlling for Phase 1 measure, two groups do not differ in terms of implicit stereotyping at Phase 2, implying the lack of change in implicit stereotyping.
H1b. Exposure group will have significantly lower levels of context dependent implicit stereotypic attitudes toward female leadership (at Phase 2) compared to the control group, controlling for Phase 1 attitude measures.	Refuted	
H1c. Exposure to a female mayor will predict significant gamma change in generalized implicit prejudicial attitudes toward female leadership across three phases.	Refuted	The findings yield that there is no significant main difference between exposure to female mayors and working with male mayors in terms of alpha change or gamma change in implicit prejudice toward female leadership, refuting both Hypothesis 1c and Hypothesis 1d.
H1d. Exposure to a female mayor will predict significant within person variation (alpha change) in generalized implicit prejudicial attitudes toward female leadership.	Refuted	
H2a.Controlling for Phase 1 implicit stereotyping, implicit stereotyping will predict within person variations (alpha change) in generalized implicit prejudice toward female leadership across three periods following exposure to a female mayor.	Refuted	Findings indicate that change in implicit stereotyping is not significantly related to alpha change (Hypothesis 2a) or gamma change (Hypothesis 2b) in generalized implicit prejudice toward female leadership across the exposure group and the control group, refuting the proposed mediational impact of implicit stereotyping (Hypothesis 2c).
H2b.Controlling for Phase 1 implicit stereotyping, implicit stereotyping will predict gamma changes in generalized implicit prejudicial attitudes toward female leadership across three periods following exposure to a female mayor.	Refuted	
H2c.Controlling for Phase 1 levels, implicit stereotyping (at Phase 2) will mediate the relationship between exposure to a female mayor and generalized implicit prejudice toward female leadership.	Refuted	

Hypotheses	Results	Explanation
H3a.The level of municipality context dependent implicit stereotyping (at Phase 2) will be positively related to sensitivity characteristics of leadership prototypes (at Phase 3) in the exposure group compared to the control group.	Refuted	The findings indicated that change in the sensitivity dimension of ILTs is not related to the latent change in implicit stereotyping or the change trajectory of implicit prejudice, refuting Hypothesis 3a, Hypothesis 3b and hence does not mediate their relation, refuting Hypothesis 3c.
H3b.The level of sensitivity characteristics in leadership prototypes (at Phase 3) will be negatively related to generalized implicit prejudice toward female leadership (at Phase 3) in the exposure group compared to the control group.	Refuted	
H3c.The level of sensitivity characteristics in leadership prototypes for municipality context (Phase 3) will mediate context dependent implicit stereotyping (at Phase 2) and generalized implicit prejudice against female leadership (at Phase 3).	Refuted	
H4. The perceived success of female mayor (Phase 2) will moderate the relationship between exposure to a female mayor and municipality context dependent implicit stereotypic attitudes toward female leadership (at Phase 2), controlling for Phase 1 levels. The higher the perceived success of female mayor, the more likely that exposure will be related to higher cognitive associations between women and leadership.	Partially supported	Findings partially support Hypothesis 4 by qualifying the effect of perceived performance by participant gender in predicting implicit stereotyping toward female leadership. The perceived performance of municipality in terms of internal affairs and mayor's administrative success significantly interact with being male in determining implicit stereotyping toward female leadership at Phase 2. Male participants who work with female mayor and attribute higher success to the municipality in terms of its internal affairs and mayor performance tend to have lower implicit stereotyping toward female leadership at Phase 2 (controlling for Phase 1). The exploratory analyses reveal that group-mean centered perceived performance of municipality significantly interacts with participant gender in predicting the change in implicit prejudice toward female leadership. Men who attribute higher performance particularly to the municipality's strategic issues and public affairs in relative to other colleagues in the same municipality have decreasing levels of implicit prejudice toward female leadership in exposure group, compared to control group.

Hypotheses	Results	Explanation
H5.The perceived communal as well as agentic characteristics of female mayor (Phase 2) will moderate the relation between exposure and municipality context dependent stereotypic attitudes toward female leadership (at Phase 2). The higher the perceived communal as well as agentic characteristics, the more likely that exposure will predict higher automatic association between female and municipality leadership.	Partially supported	High agency and high communality of female mayor do not predict the implicit stereotyping by itself, yet it interacts with participant gender in determining implicit stereotyping toward female leadership at Phase 2. Male respondents who perceive high agency and high communality of female mayor have lower implicit stereotyping at Phase 2, controlling for Phase 1 GL-IAT measures. The exploratory analyses reveal that the findings do not yield significant effects of high agency-and-high communality on the slope of P-IAT, but leader agency predicts significantly decreasing levels of implicit prejudice in the exposure group, compared to control group. The group mean centered mayor agency, in contrast, predicts increasing levels of implicit prejudice, yet this effect does not differ across the exposure group versus the control group.
H6a.Frequent interactions with a female mayor (Phase 2) will moderate the relationship between exposure and context dependent implicit stereotypic attitudes toward female leadership (at Phase 2). The higher the frequency of interaction, the more positive will be the relationship between exposure and automatic association between female and leadership in municipality context.	Supported	The quantity of close interaction with female mayor predicts lower implicit stereotyping at Phase 2, controlling for Phase 1 measure of stereotyping, supporting Hypothesis 6a. I explore the interactions with participant gender and find that male participants who have more frequent interaction with their female mayor have higher implicit stereotyping, whereas female counterparts have lower implicit stereotyping toward female leadership.
H6b.High quality interactions with the female mayor (Phase 2) will moderate the relation between exposure and context dependent implicit stereotypic attitudes toward female leadership (at Phase 2). The higher the high quality interactions, the more will be the positive relation between exposure and automatic association between female and leadership in municipality context.	Partially supported	The overall quality of interaction with the mayor and the quality of affective leader-member exchange significantly predict lower implicit stereotyping attitudes toward female leadership at Phase 2 in the exposure group. However, the exposure group and the control group significantly differ on implicit stereotyping at Phase 2 for only the interactive effect of LMX-affect and being male, partially supporting Hypothesis 6b. Female respondents who perceive higher affective LMX with their female mayor tend to have lower implicit stereotyping at Phase 2, controlling for Phase 1 measure.

Hypotheses	Results	Explanation
H6c. High quality interactions with the female mayor (Phase 2) will moderate the relation between exposure and generalized implicit prejudicial attitudes toward female leadership (at Phase 3). The higher the high quality interaction with the female mayor, the more positive will be the relationship between exposure and automatic association between female leadership-positive cues.	Supported	The quality of interaction and particularly exchange quality with the mayor significantly moderate the relationship between exposure and change in implicit prejudice toward female leadership, supporting Hypothesis 6c. The perceived affective interaction with the female mayor and professional respect toward the female mayor significantly predict decreasing levels of implicit prejudice toward female leadership in the exposure group, compared to the control group.
H7a.The association between exposure and the context dependent automatic association between female and leadership (Phase 2, controlling for Phase 1) will be lower for high gender identifier employees compared to low identifiers.	Refuted	Being high identifier is not found as significant predictor of implicit stereotyping in neither group. In contrast to Hypothesis 7a, men who score higher at femininity sex role orientation have higher implicit stereotyping toward female leadership in the exposure group, compared to the control group males with low femininity orientation.
H7b.The association between exposure and the within person variation in generalized implicit prejudicial attitudes toward female leadership will be lower for high gender identifiers compared to low gender identifier employees.	Refuted	The feminine or masculine orientations of participants and being high identifier are not significantly related with the trajectory of implicit prejudice toward female leadership.

5.1.Malleability of Context Dependent Implicit Stereotyping and Generalized Implicit Prejudice toward Female Leadership

5.1.1. Exposure to a female mayor and context dependent implicit stereotyping toward female leadership

One main research question is whether exposure to a female leader at work might enable alterations in the association between the mental representations of "female" and "leadership" concepts. This proposition resides on the contextualization argument of the APE model and ILTs. According to the APE model (Gawronski & Bodenhausen, 2011; Gawronski & Sritharan, 2010; Hugenberg et al., 2010; Rydell & Gawronski, 2009), the sub-typing tendencies reported in attitudinal research can emerge as context specific alterations in the automatic associations, while there is no change in the generalized implicit attitudes. I similarly argued that first time exposure to a female mayor would not readily alter employees' implicit prejudices, but can challenge the mental associations of female and leadership in the municipality. Considering the connectionist framework of ILTs, I posited that first time experience with a female leader occupying the highest office (i.e., mayor) in the municipality context could activate characteristics of women and mayor in mind repeatedly and simultaneously. This, in turn, can make the mental associations stronger, decreasing the context dependent implicit stereotyping toward female mayors.

Considering these arguments, I hypothesized that the cumulated experience with a woman mayor during the time between the elections and first time data collection (Hypothesis 1a) as well as the time between first time and second time data collection (Hypothesis 1b) may have challenged the context dependent implicit stereotyping toward female leadership. In contrast to these expectations, the analysis showed no significant difference between the exposure group and the control group in terms of implicit stereotyping at Phase 1 or at Phase 2, refuting Hypothesis 1a and Hypothesis 1b. There was also no group difference on implicit prejudice at Phase 1. Although the lack of group difference on implicit stereotyping at Phase 1 refuted the hypothesis, taken together non-significant findings back the matching of employees in the exposure group and the control group in terms of implicit attitudes toward female leadership at the beginning of data collection.

Considering the significant relationships between participant gender and implicit stereotyping in univariate analyses, I explored the interactive effect of participant gender and exposure to female mayor on the Phase 2 implicit stereotyping levels. The exploratory analyses showed that female employees' implicit stereotyping against female leadership was significantly higher at Phase 2, compared to male employees, controlling for Phase 1 implicit stereotyping. The main effect of exposure to a female mayor or the interactive effect of exposure and gender on the Phase 2 implicit stereotyping was not significant. The presence of longitudinal structural invariance of GL-IAT across Phase 1 and Phase 2 as well as across groups also agrees with the non-significant group differences. The longitudinal invariance analyses revealed that GL-IAT has factorial mean equivalence across Phase 1 and Phase 2. This indicated neither a gamma change nor an alpha change across two phases of implicit stereotyping toward female leadership.

The lack of group difference and the presence of structural invariance estimates of GL-IAT together refuted Hypothesis 1b and implied the stability of implicit stereotyping toward female leadership across 9 to 12-month exposure to a female leader. This finding is in contrast to the findings reported by Dasgupta and Asgari (2004). In their longitudinal field study, Dasgupta and Asgari (2004) tracked the female students of women's colleges and other regular colleges at the beginning of the first year in college and then at the end of the first year in college. They found that students had lower levels of implicit stereotyping against female leadership after one-year contact with female lecturers and deans in women's colleges, compared to students in regular colleges. One explanation of the current non-significant findings is that their research setting might enable students more frequent exposure to female leader figures and closer interaction with them on daily basis. Municipal employees might not have so frequent or close interaction with their female mayor as students interacted with their professors, lowering the impact of exposure effect on implicit stereotyping toward female leadership.

Another explanation is that the trajectory of context dependent implicit stereotyping toward female leadership may have changed across three phases of data collection rather than two phases. Indeed, Selig and Preacher (2009) argue that the time spans of repeated observations can limit alterations in trajectories. Considering this argument, I provided the measure of implicit stereotyping (GL-IAT) to

participants at Phase 3, too (though not hypothesized). Prior to data collection, I planned to explore the change trajectory of implicit stereotyping (Cheong et al., 2003; Selig & Preacher, 2009). If I found at least strong longitudinal measurement invariance (longitudinal scalar invariance; Chan, 1998) of GL-IAT, I would conduct MLGM on implicit stereotyping. Instead, I utilized the latent change scores of implicit stereotyping (Phase 2 – Phase 1). Indeed, the measurement invariance (MI) test of GL-IAT across three phases and across groups (exposure vs. control) did not support the longitudinal configural invariance model, potentially indicating a gamma change (the restructuring of the attitude construct in mind; Chan, 1998; Riordan et al., 2003; Thompson & Hunt, 1996; Vandenberg, 2002; Vandenberg & Lance, 2000). That is, the mental configurations of female and leadership might be restructured so that employees' understanding of the context dependent leadership might be altered over three phases.

Rather than an indication of gamma change, the failure of configural invariance model might reflect problems in the construct validity of GL-IAT (Cheung & Rensvold, 2002), as partially tracked in relatively low reliability coefficients of GL-IAT, ranging from .14 to .20. As discussed in the methodology section, the test-retest reliability of latency measures is often lower than the rule-of-thumb values commonly accepted for the explicit counterparts (Nosek et al., 2007a; Lane et al., 2007; Payne & Gawronski, 2010). The relatively low reliability of latency measures is often the result of their sensitiveness to time lags among the repeated measurement and the immediate testing conditions, such as any environmental distractors, or fatigue during testing (Nosek et al., 2007a). Most studies retested IATs in an experimental setting with a short time lag (e.g., one week or few days). In such a design, the test-retest reliability of IATs is around .50 to .69. A longer time lag decreases the test-retest reliability of IATs, to as low as .20 (Cunningham et al., 2001). The range of GL-IAT is below the range of .20 to .69, whereas the reliability range of P-IAT is .35 to .46 in the control group. Hence, the time lag may not be responsible for the low reliability in the current study. Moreover, I took some precautions to make the testing conditions of IATs similar across time and across participants (as detailed in the methodology section; e.g., Cunnigham et al., 2001; Lane et al., 2007). For example, I counterbalanced the presentation of GL-IAT and P-IAT across participants to overcome fatigue effect. If the immediate testing conditions were threat to the test-retest reliability of GL-IAT, I

would expect to find a similar effect for P-IAT. The test-retest reliability of P-IAT was at moderate levels, suggesting that testing conditions are probably not responsible for the relatively low test-retest reliability of GL-IAT. Besides, although the internal consistency coefficients of GL-IAT are at acceptable levels across the exposure group (.74 to .81) and the control group (.68 to .78), they are lower than the internal consistency levels of P-IAT in the exposure group (.88 to .92) and in the control group (.89 to .93). An alternative explanation is, the cognitive distinction between the uses of words versus pictures might play role in the differences between GL-IAT and P-IAT. Such a tendency is empirically shown in a recent experimental study (Carnevale, Fujita, Han & Amit, 2015). The study examined how the words and pictures utilized in IATs influence the evaluative associations in mind. They reported that words in IATs activate higher level processing such as more broad and abstract categories in mind, and provide a room for self-control, whereas pictures in IATs activate lower level processing such as direct and vivid experiences. Similarly, in the current study, the GL-IAT might require more attention to perceive stimuli – words reflecting leadership and followership, whereas P-IAT requires less cognitive processing since it presents pictures/graphic figures of leaders. Moreover, pictures in P-IAT might be clearer to respondents, and ease the categorization. On the other hand, leadership versus followership characteristics might be less easy to read and grasp quickly. Moreover, I tried to contextualize the GL-IAT by using "municipality mayor" as the leader label and "municipality employee" as the follower label. These factors might increase the cognitive load required for stimuli categorizations, resulting in within person fluctuations in responding to GL-IAT across time and therefore lower reliability coefficients (Nosek et al., 2007; Lai et al., 2007). Future studies should re-examine the construct validity and particularly the reliability of GL-IAT in other contexts. One can test and compare alternative sets of leadership versus followership stimuli in GL-IAT to pinpoint the problems related to the content validity. The test-retest reliability of GL-IAT must be tested in other study contexts with varying time intervals.

Overall, there is no support for the malleability of the context dependent implicit stereotyping following nine to 12 months exposure to a female mayor. The exploratory analyses imply gamma change in the implicit stereotyping across three phases, yet this is not a definitive finding given the low reliability estimates of GL-IAT. Hence, there is a tentative and weak support for the contextualization argument

of the APE model (Gawronski & Bodenhausen, 2006). In the light of generalization process offered by the APE model, I, furthermore, proposed change in the trajectory of generalized implicit attitudes toward female leadership.

5.1.2. Exposure to female mayor and implicit prejudice toward female leadership

I argued that accumulated experiences with a female leader might enable the generalization of immediate experiences to other context, altering the implicit prejudice toward female leadership. Basing on the alpha-beta-gamma change models in organizational studies (Chan, 1998; Riordan et al., 2003; Thompson & Hunt, 1996; Vandenberg, 2002; Vandenberg & Lance, 2000), I argued that exposure to a female leader can alter overall construction of mental associations - gamma change (Hypothesis 1c). Alternatively, it might just change the strength of association among the mental representations of female leadership - alpha change (Hypothesis 1d). The direction of within person variations in implicit prejudice toward female leadership is also critical, although I did not formally hypothesize it. Regarding the arguments of intergroup contact theory (Allport, 1954/1979; Pettigrew, 1998) and the empirical evidence (e.g., see meta-analysis of Pettigrew & Tropp, 2006), mere exposure to a female mayor might decrease the implicit prejudices against female leadership across three phases. However, exposure to a female mayor might also increase the perceived breach in the prescriptive gender norms, resulting in backlash (Rudman et al., 2012) and therefore may increase the implicit prejudice against female leadership over time.

The longitudinal measurement invariance and structural invariance tests on the measure of implicit prejudice toward female leadership (P-IAT) revealed no evidence of gamma change across the exposure versus the control group, refuting Hypothesis 1c. The trajectory analyses through MLGM revealed decrease in implicit prejudice in both the exposure group and the control group across three phases. The trajectories are significantly in linear forms as would be expected from three repeated measurement designs (Chan, 1998; Preacher, 2010). Multiple group MLGM shows the trajectories of two groups do not significantly differ from each other, indicating no significant alpha change following exposure to a female mayor compared to the control group. This refutes Hypothesis 1d.

One potential reason of the significant decrease in implicit prejudice toward female leadership in both groups is, exposure effect might not be restricted to employees in municipalities where the female mayor was elected. It might be relevant for employees in other municipalities through extensive cover in the national media as well as local press following the March 2014 local elections. Indeed, as I mentioned and exemplified through media reports in the theoretical background section before, the March 2014 local elections drew national interest to female mayors who were elected for the first time of the municipality histories. Female mayors gave speeches after their victory in national media, have been focus of attention in local press and in particularly the social media of affiliated political parties. Employees in the control group might not personally interact with the female mayors, but they might be merely observing women's occupation of an authority position in a work setting similar to theirs. This is in accord with the arguments of mere exposure effect (Pettigrew & Tropp, 2006). The mere observation of female mayors might be enough to challenge the automatic association between female and leadership, resulting in no significant group differences in implicit stereotyping. It might also lower the negative image of female leadership for all employees, leading to significant decrease in implicit prejudice toward female leadership. These arguments are speculative given that I did not assess employees' indirect exposure, for example, through media coverage and therefore could not control for these potential influences, which constitute a confounding effect that threatens the internal validity of the present longitudinal study (Shadish et al., 2002). I highly recommend future studies to account for the indirect ways of exposure to female leadership at work setting to examine the malleability of implicit stereotyping and implicit prejudice. It will be very interesting to compare the differential impact of merely observing a female leader in another organization versus personally interacting with her in the immediate work context. Researchers can compare the sub-typing and contextualization tendencies, decrease or increases in implicit stereotyping and implicit prejudice across various ways and extent of exposure to a female leader.

5.2. Mediating Effects of Change of Implicit Stereotyping and Change of Implicit Leadership Theories (ILTs)

Considering the de-contextualization mechanisms of implicit attitudes posited by the APE model (Gawronski & Bodenhausen, 2011; Gawronski & Sritharan, 2010; Rydell & Gawronski, 2009), I proposed that the change in the context specific implicit attitudes might be generalized to other contexts. I argued that such generalization process would emerge as change in implicit prejudice toward female leadership. As discussed above, I anticipated that the repeated pairing of women and leadership in an immediate context might first alter the strength or the composition of the mental representations about female and mayoral leadership (change in the context dependent implicit stereotyping). Such a change, then, might challenge the mental associations of female leadership and negative cues over time, resulting in gamma change (Hypothesis 2a) or gamma change (Hypothesis 2b) in implicit prejudice toward female leadership. If so, I predicted that the change in the context dependent implicit stereotyping toward female leadership might mediate the relationship between exposure to a female leader and change in generalized implicit prejudice toward female leadership (Hypothesis 2c).

Building on this de-contextualization argument, I furthermore suggested that the stronger mental association between female and leadership following exposure might promote the prevalence of sensitivity characteristics in employees' leadership prototypes and hence change the leadership prototypes. This argument was based on ILTs connectionist framework (Dinh & Lord, 2012; Hogue & Lord, 2007; Lord & Hall, 2003; Lord & Shondrick, 2011) and empirical findings revealing the context sensitivity of leadership prototypes (e.g., Foti et al., 2008; Scott & Brown, 2006). The repeated activation of "female" and "leadership" characteristics in mind might trigger higher levels of feminine or sensitivity properties in leadership prototypes at Phase 3 (Hypothesis 3a). The accrued prevalence of sensitivity characteristics (e.g., caring, sensitive, compassionate), in turn, might challenge the implicit prejudice through decreasing the perceived mismatch between female leadership and positive evaluations (Hypothesis 3b). If so, I hypothesized that the level of sensitivity characteristics in ILTs for municipality context (Phase 3) would mediate the relation between municipality context dependent implicit stereotyping (at Phase 2) and generalized implicit prejudice against female leadership (at Phase 3) (Hypothesis 3c).

The analyses revealed no significant multivariate relationships among the latent change in implicit stereotypes, the latent change in leadership prototypes and the change trajectory of implicit prejudice toward female leadership. These findings refuted Hypothesis 2a and Hypothesis 2b as well as Hypothesis 3a and Hypothesis 3b. These insignificant findings are not surprising, partially because the within person variations in implicit prejudice is not significant in the exposure group compared to the control group. Previous analyses also revealed non-significant group (exposure vs. control) differences on Phase 1 as well as Phase 2 implicit stereotyping. The tests of the mediating effects of implicit stereotyping as well as leadership prototypes were not therefore significant, refuting Hypothesis 2c and Hypothesis 3c, respectively.

These findings do not endorse the de-contextualization proposition of the APE (Gawronski & Bodenhausen, 2011; Gawronski & Sritharan, 2010; Rydell & Gawronski, 2009) which states that the exposure to a female leader would alter the context dependent implicit stereotyping and then generalize it in implicit prejudice toward female leadership. Instead, the results might be indicating overall stability of implicit stereotyping, and implicit prejudice following first time exposure to a female mayor within a one-year observation period compared to the control group. The findings also do not pinpoint any significant change in implicit prejudice toward female leadership through leadership prototypes. One potential explanation might be that particularly overall content of leadership prototypes does not change over the 12 to 15-month period of exposure to a female leader, compared to the control group. This is in contrast to expectations based on the immediate context dependent alterations of leadership evaluations argued by connectionist framework of ILTs (Foti et al., 2008; Lord et al., 2001), yet aligned with the previous findings of Epitropaki and Martin (2005). These researchers found that leadership prototypes do not change over a one-year period and influence the variations in leadership evaluations of employees, such as the quality of interaction with the manager (i.e., LMX). They did not examine any organizational/environmental change that might have potentially triggered the change of implicit leadership theories. Current results built on their findings by revealing that it might not be easy to challenge leadership prototypes over a one-year period, even though employee are experiencing changes at leadership figures. Future studies can benefit from re-examining the mediating effects of leadership prototypes in

an extended observation period, or with changes in the organizational setting other than leader succession.

5.3.Moderating Effect of Employee Perceptions of Mayor's Success and Agentic-Communal Characteristic

I proposed that female leaders' characteristics in the eyes of employees might influence the relationship between exposure and implicit stereotyping as well as implicit prejudice toward female leadership. I specifically focus on the perceived success of the mayors and their agentic as well as communal characteristics.

5.3.1. Moderating effect of the perceived municipality performance as an indication of the perceived success of mayor

Considering the intergroup contact approach (Pettigrew, 1998), I anticipated that the indicators of success can make contact with counter-stereotypic exemplar – i.e., female leader – "salient" (Blair, Dasgupta & Glaser, 2014) to employees, facilitating the contact's influence against stereotyping. At the implicit level, as suggested by the APE model (Gawronski & Bodenhausen, 2006), success indicators of female mayors can strengthen the association between female and the context specific leadership representations in employees' mind (lower implicit stereotyping). I, therefore, proposed the moderating role of overall perceived organizational performance and the dimensions of performance (i.e., strategic issues, public services/affairs, and internal relations/affairs) at Phase 2 on the relationship between exposure and implicit stereotyping (Hypothesis 4). I expected that the higher the perceived success attributed to the mayor through municipality performance, the more likely that exposure would predict lower implicit stereotyping.

The analyses yielded that employees' perceived municipality performance on internal affairs relative to others significantly interacted with participant gender in the exposure group, but not in the control group. Male participants who worked with a female mayor and attributed higher success to the municipality (internal affairs) tend to have lower implicit stereotyping toward female leadership at Phase 2 (controlling for Phase 1). Other perceived success indicators did not significantly moderate the

relationship between exposure and implicit stereotyping at Phase 2. These results partially supported Hypothesis 4 by qualifying the moderating effect of perceived mayor success in relation with the participant gender and performance in internal affairs. The performance of female mayors in managing the internal affairs of the municipality in the eyes of male employees seems to predict lower implicit stereotyping across a 9 to 12-month of exposure to a female mayor.

I additionally explored whether my predictions held for the change trajectory of implicit prejudice toward female leadership. I examined whether the perceived organizational performance would moderate the relationship between the exposure and the change trajectory of implicit prejudice toward female leadership. The interaction between all three perceived organizational performance indicators and gender significantly predicted a decreasing trajectory of implicit prejudice in the exposure group. In particular, male participants who perceived higher municipality performance in terms of strategic issues and public affairs had higher decrease in implicit prejudice toward female leadership following a 12 to 15-month exposure to a female mayor.

Taken together, success attributed to the female mayor explained lower implicit stereotyping and decreasing generalized implicit prejudice particularly for male participants. These findings are in line with the arguments based on the intergroup contact theory and the APE model. The higher perceived success relative to other employees in the municipality may augment the counter-stereotypical characteristics of the mayor and therefore act against implicit stereotypes. The cumulative association of a real-life successful woman leader image and her leadership position might have substantiated the mental representation of female and mayoral leadership, resulting in lower implicit stereotyping scores at Phase 2. In terms of implicit prejudice, considering the EC arguments of the APE model (Gawronski & Bodenhausen, 2006), the cumulative perceptions on the municipality success and the female mayor success has enabled the conditioning of female leadership with positive experiences. Hence, the perceived success of a specific female leader seems to challenge the mental associations between negative cues and female leadership, decreasing implicit prejudice.

The divergent moderating effect of performance indicators is an unexpected and interesting finding. The performance indicators are the sub-dimensions of the Perceived Municipality Performance Scale. The scale has a relatively high internal

consistency at Phase 2 (overall score $\alpha = .91$, in the control group). The correlations among these sub-indicators are relatively high in the exposure group (ranging from .85 to .96) as well as in the control group (ranging from .80 to .94). Therefore, I was expecting to find similar effects of these performance indicators in predicting implicit stereotyping during hypothesis testing. Interestingly, in contrast to my expectations, the perceived performance of the municipality of a female mayor in terms of internal affairs appears as a critical predictor of lower implicit stereotyping for male employees in the exposure group. On the other hand, the municipality performances on strategic issues and public affairs emerge as important predictors of diminishing implicit prejudice for male participants in the exposure group.

Such a divergence of performance indicators might enable us to integrate the contrasting theoretical predictions on the perceived success of the female leader reviewed in the Theoretical Background section. I found a significant moderating effect of the perceived success on the internal affairs but not on the strategic issues and public affairs, probably because employees may have gained knowledge on the mayor's role and contributions in the internal affairs at Phase 2, but not much on the strategic issues or public affairs. The decisions of mayors on internal affairs might have been readily visible to employees at Phase 2. Phase 2 corresponds to the 9 to 12-month period following the elections (around February to April of 2015), yet as mentioned before, the communications with the key informants in the municipalities revealed that employees had chance to observe and interact with the mayor particularly after the summer vacation, during the fall of 2014. Similarly, the field observations suggest that mayors took actions first on internal issues, such as the rotations of employees across departments, after the elections. Their active decisions on the strategic issues and the activities/services provided to the organization may have extended over time. Employees' clearer knowledge on the internal affair might challenge implicit stereotyping, as offered by the arguments based on the intergroup contract theory and the APE model. Indeed, in their experimental tests on the rationalization of success argument, Heilman and Haynes (2005) found that the attribution of the success of female figures to external factors (the rationalization of success) diminishes when the individual contribution of female figures are clear. Employees might have ambiguous knowledge on the strategic performance of the municipality and the quality of its services to the public at Phase 2. This presumably

enabled the rationalization of success to factors external to the female mayor and therefore resulted in no significant moderating effect of the perceived performance on implicit stereotyping at Phase 2, as contended by the rationalized success argument in the role congruity literature (Eagly & Carli, 2003; Heilman & Haynes; 2005).

We can extend this logic of argument to the implicit prejudice. Male employees in the exposure group had significantly less implicit prejudice for the higher perceived municipality performance on strategic issues and public affairs, compared to the control group. The two group differences are at marginally significant levels for the internal affairs. In other words, following exposure to a female leader for a 12 to 15 month period, male employees seem to have gained additional information on the municipality performance on public affairs and strategic issues. Therefore, they had lower implicit prejudice toward female leadership, as would be anticipated by Heilman and colleagues (Heilman & Haynes, 2005; Heilman, 2012).

Another major finding is none of the perceived performance indicators significantly predicted the implicit stereotyping or the change trajectory of implicit prejudice by itself, but significantly predicted them through interacting with participant gender. Inferences reported above apply particularly to male employees. Being male seems critical in determining the perceived success' impact on the implicit stereotyping and implicit prejudice toward female leadership at work.

The present finding on participant gender contributes to past research which demonstrated mixed findings for gender differences on the reactions to successful women in general (e.g., Heilman & Haynes, 2005; Inesi & Cable, 2015; Joshi, 2014; Parks-Stamm, Heilman & Hearns, 2008), yet majority of previous studies were not on implicit stereotyping/prejudice toward female leadership. Some findings indicated no gender differences on the rationalization of success of female team members in tasks that are mostly associated with men (e.g., Heilman & Haynes, 2005), or no gender difference on the devaluation of the expertise of women authorities in groups at all (e.g., Joshi, 2014). Males and females attributed female members' success to external factors at similar degrees in those studies. Similarly, in their experimental study, Parks-Stamm and colleagues (2008) found that male and female participants do not differ in their motivation to evaluate a successful woman as unlikable and hostile in interpersonal relations for male sex type tasks.

The present finding on gender differences reveals different attitudinal mechanisms of male and female employees unlike the lack of gender differences on the evaluations about the successful women reported in past literature. Similar to current findings, the experimental manipulations of Parks-Stamm and colleagues (2008) revealed that females tend to devalue the contributions of women in jobs mostly associated with men (male sex typed jobs), because they tend to feel inferior to these successful women in such tasks. Therefore, in order to protect their sense of competence, females might derogate the successful contributions of other women in male sex typed jobs. Indeed, when women's sense of competence enhanced through manipulations, such a penalization of successful women diminishes (Parks-Stamm et al., 2008). In the current study, female employees could have overcome the threat to their competences by undervaluing the female mayor's success more by disregarding the perceived municipality performance during automatic evaluations of female leadership, compared to male employees. That might be why being male might have significantly interacted with the perceived success in predicting the implicit stereotyping at Phase 2.

Males seem to experience a significant decrease in the implicit prejudice toward female leadership through perceiving higher success of their female mayors. This is in contrast to past research that argue that men might derogate the success of women to defend their selves (manhood; e.g., Joshi, 2014) against the threat of successful women to their position in the social hierarchy and the social status (Inesi & Cable, 2015; Rudman et al., 2012). Accordingly, due to the breach in the norms about the social hierarchy, males would be more likely to show the backlash effect toward successful women leaders. In contrast to these backlash arguments, the present study reveals that male employees' attribution of success to female mayors particularly in strategic issues such as budgeting as well as organization's relationship with the environment, such as services provided to the customers can positively condition mental associations about women's leadership. Male employees might positive experiences through such organizational and mayoral success. Therefore, their implicit prejudice might decline, as predicted by EC argument of the APE model (Gawronski & Bodenhausen, 2011). Future research should re-examine whether the perceived success of female leaders decreases implicit stereotyping and implicit prejudice toward

female leadership for males and females at similar degrees in organizational contexts and with other performance indicators, too.

5.3.2. Moderating effect of the perceived agency and communality of the female mayor

I proposed that the perceived agentic and communal characteristics of the female mayor might influence implicit stereotyping and implicit prejudice. Considering theoretical arguments highlighting the female advantage in high authority positions (e.g., Eagly & Carli, 2003; Johnson et al., 2008; Rosette & Tost, 2010; Rudman et al., 2012), I argued that high agency and high communality of female mayors can promote the mental association of female and leadership in the municipality context. I hypothesized that the perceived communal as well as agentic characteristics of female mayors (Phase 2) would moderate the relation between exposure and municipality context dependent stereotypic attitudes toward female leadership (at Phase 2). The higher the perceived communal as well as agentic characteristics, the more likely the exposure would predict higher implicit stereotyping (Hypothesis 5).

The results yielded that contrary to the hypothesis, the indicators of high agency-high communality dummy variable did not significantly predict implicit stereotyping (Phase 2, controlling for Phase 1) in the exposure group. Nevertheless, high agency-high communality significantly interacted with participant gender. Male respondents who attributed higher agency and high communality to their female mayor relative to other employees in their municipality had significantly lower implicit stereotyping toward female leadership at Phase 2, partially supporting Hypothesis 5. As claimed by the female advantage arguments (Eagly & Carli, 2003; Johnson et al., 2008; Rosette & Tost, 2010), the female mayors' balance of perceived agency and communality yielded stronger mental association between female and leadership for males in the municipality context, controlling for baseline measurement.

The exploratory analyses on MLGM did not provide any evidence on the moderating role of high agency and high communality of female mayors on implicit prejudice toward female leadership following exposure to a female leader. Contrary to my arguments based on female advantage literature (Eagly & Carli, 2003; Johnson et

al., 2008; Rosette & Tost, 2010; Rudman et al., 2012), the balance of agency and communality might not have created a positive image of female mayors and therefore did not challenge the mental association between female leaders and negative cues. Instead, I found that the general agreement on the agentic characteristics of the female mayor within a given municipality predicted lower implicit prejudice, whereas employees' evaluation of leader agency relative to other participants of their municipality predicted higher implicit prejudice in the exposure group. These two findings suggest that while exposure to an agentic women leader is associated with a decreasing trajectory of prejudice, controlling for agency of the leader employees who perceive even more agency than average increase in their prejudice. Decreasing implicit prejudice following an agentic female leader is supportive of the arguments derived from the APE model (Gawronski & Bodenhausen, 2006) and the ILTs approach (Hogue & Lord, 2003). An agentic female mayor may have signaled her effectiveness as the leader in the municipality. From the perspective of ILTs, employees might categorize the agentic female mayor as leader. From the perspective of the APE model, the accumulated signals of her agency over time might have signaled her effectiveness as leader and therefore endorsed a more positive view of the female mayor. This, in turn, might be generalized to positive mental representations of female leadership. On the other hand, increasing trajectory of implicit prejudice for employees who attributed even higher agency to the female leader, than average is in accordance with the backlash argument (Rudman et al., 2012). Considering the backlash effect arguments of the role congruity theory (Eagly & Diekman, 2005; Eagly & Karau, 2002) and the status incongruity theory (Rudman et al., 2012), I argue that employees' attribution of agentic characteristics (such as being dynamic, or ability to exert authority) to the female leader relative to their colleagues in the given municipality might breach the prescriptive gender norms. This might have created a backlash effect, might be generalized to overall female leadership, and therefore resulting in higher negative mental images of female leadership (higher implicit prejudice).

Taken together, female leader's balance of agentic and communal behaviors in the eyes of male employees predicts lower implicit stereotyping, supporting the female advantage arguments (Eagly & Carli, 2003), APE model and ILTs approach. The aggregate level perceived agency predicted lower implicit prejudice, additionally

revealing the alternative explanations based on the APE model and ILTs approach. In contrast, employees' perceptions of higher agency of the female leader (relative to other colleagues) explained increase in implicit prejudice toward female leadership across three phases. This supports the backlash effect argument.

Overall, the current results partially support the significant moderating role of the perceived female mayor characteristics, in terms of success and the agentic-communal characteristics. I proceeded to focus on the moderating roles of the interaction between the female leader and employees. I examined the quality and quantity of interaction with the female leader as potential moderators of the relationship between exposure and implicit attitudes toward female leadership.

5.4.Moderating Effect of the Quantity and Quality of Interaction with the Female Leader

I suggested that the frequent interactions with the female mayor might strengthen the mental associations between female and leadership in the municipality (Hypothesis 6a) as well as the associations between the implicit stereotyping and implicit prejudice (Hypothesis 6b). I adopted the arguments of the intergroup contact theory (Allport, 1954/1979; Pettigrew, 1998; Pettigrew & Tropp, 2006) and the APE model (Gawronski & Bodenhausen, 2006; 2011) to female leadership context at work. From the perspective of the EC arguments of the APE model, high leader-member exchange (LMX; e.g., liking the mayor) and perceived interactional justice of mayor can positively condition mental associations on female leadership. These positively conditioned mental associations can impose over the negative representations of female leadership in mind and therefore decrease context dependent implicit stereotyping (Hypothesis 6c) and generalized implicit prejudice. Through the generalization process proposed by the APE model (Gawronski & Bodenhausen, 2011), the high quality interactions would increase the relationship between implicit stereotyping (Phase 2) and change trajectory of generalized implicit prejudice (Hypothesis 6d).

As expected in Hypothesis 6a, I found that frequent close interactions with the female mayor (Phase 2) predicted significantly lower implicit stereotyping (at Phase 2) compared to control group. Particularly, female employees who had frequent

interaction with the female mayor had lower implicit stereotyping toward female leadership (at Phase 2). In contrast to Hypothesis 6b, the frequent interactions did not significantly moderate the relationship between exposure and change trajectory of implicit prejudice.

Taken together, frequent interaction with the female mayor significantly predicts lower implicit stereotyping at Phase 2, but not the change trajectory of implicit prejudice. The significant finding is aligned with the previous finding of Dasgupta and Asgari (2004). They similarly reported that female employees' frequent contact with female college professors predicted lower implicit stereotypes toward women within one-year period. The current finding also is also in line with my propositions based on the intergroup contact approach and the APE model. The quantity of contact is one of the optimal conditions for contact effect proposed by the interpersonal contact theory (Allport, 1954/1979; Pettigrew, 1998; Pettigrew & Tropp, 2006). Accordingly, frequent contact can make the counter-stereotypic figures more salient and therefore can enhance the contact's impact on stereotyping. APE model (Gawronski & Bodenhausen, 2006; 2011) proposed a similar effect at the implicit level. Accordingly, the frequent observation of counter-stereotypic figures (e.g., female leaders) can repeatedly activate mental paths about the figure (e.g., higher activation of mental associations between female and leadership in mind), decreasing implicit stereotypes. Current findings indicate that the repeated activation of the paths between female and leadership in the municipality context might have made the association between female and leadership stronger in mind, leading to decrease in implicit stereotyping toward female leadership. Further analyses also revealed that the quantity of interaction indicators did not significantly predict the change trajectory of implicit prejudice in the exposure group. This is in contrast to the idea that frequent contact can decrease prejudice through increasing familiarity and knowledge about the prejudiced group (Allport, 1954/1979; Pettigrew, 1998).

The results also indicated that high quality interactions with the female mayor (Phase 2) in general did not significantly predict implicit stereotyping (Phase 2). Yet, the overall quality of interaction and the affective component of LMX significantly interacted with participant gender in predicting implicit stereotyping. High quality interactions in general and high affective LMX in particular predicted lower context dependent implicit stereotyping in the exposure group for female employees,

compared to males. This finding support Hypothesis 6c. Moreover, the overall quality of interaction, affective component of LMX and the professional respect dimension of LMX at Phase 2 significantly predicted decreasing implicit prejudice in the exposure group, in contrast to the control group. This is also supporting Hypothesis 6d. Employees who reported higher positive and affective exchange relations with the female mayor at Phase 2 had diminishing implicit prejudice against female leadership over time. Similarly, employees who respected the professional abilities and competencies of the female mayor had decreases in implicit prejudice against female leadership. This time, there was no gender difference on these moderating effects of interaction quality.

These results collectively provide evidence for the arguments of intergroup contact theory and the APE model. Although I did not measure attitudes toward female leadership at explicit level, positive interactions with the counter-stereotypic figure – female leader – might have increased the knowledge/familiarity about female leaders in general and decreased the anxiety against them, diminishing prejudice. At the implicit level, the positive experiences with the leader seem to make the automatic association between female and leadership more salient in the municipality context, lowering implicit stereotyping. Moreover, high affective components and professional respect of LMX with the female mayor seem to elicit positive mental associations on female leadership across three phases. This supports the evaluative conditioning (Olson & Fazio, 2006) argument of APE model (Gawronski & Bodenhausen, 2006; 2011). The accumulated pleasant experiences with the female mayor seem to condition the mental representations about the female leadership. The mental associations of female leadership might become more positive, decreasing the implicit prejudice. For example, employees who liked their female mayor (high affective LMX) seem to generalize these positive experiences to female leadership. Indeed, past research showed that the quality of interaction with real-life women authority figures (e.g., Dasgupta & Asgari, 2004) predicted higher automatic association between women and high authority positions/occupations.

In sum, frequent interactions and high quality affective relationship with the female mayor explained lower implicit stereotyping particularly for female employees following 9 to 12 month exposure. The repeated activation of female and mayor through frequent and positive interactions with the female mayor seem to diminish

implicit stereotyping. The affective interactions (affective dimension of LMX) with the female mayor and respecting her professional stance (professional respect dimension of LMX) explained a decreasing trajectory of implicit prejudice. The accumulation of positive affective and professional interactions with the female leader seems to make the mental associations of female leadership positive over time. The findings are supporting the optimal conditions of intergroup contact theory and the APE model.

5.5.Moderating Effect of Gender Identity

Considering the contradicting past findings on the role of participant gender, I proposed that participants' sex role identity might clarify the relationship between exposure and context dependent implicit stereotyping as well as generalized implicit prejudice against female leadership for each gender group. The identification with gender roles can raise the saliency of gender of others and therefore participants may tend to attend the gender norms while evaluating female leaders (Joshi, 2014; Wood & Eagly, 2015). Participants may tend to perceive higher mismatch between the leadership roles and female roles as offered by the role congruity theory (Eagly & Karau, 2002; Wood & Eagly, 2015). I, therefore, suggested that employees' attention to the gender of the female mayor due to high sex role identity would decrease the exposure's effect on the automatic association between female and leadership (higher implicit stereotyping at Phase 2, controlling for Phase 1; Hypothesis 7a). Similarly, the reliance of gender norms can enhance the perceived breach in gender norms during real life experiences with the female leader, potentially resulting in backlash effect and therefore higher prejudice toward female leadership over time. I, therefore, hypothesized that the association between exposure to a female leader and the change trajectory of implicit prejudice toward female leadership would be lower for participants who identify with their sex role (Hypothesis 7b).

The analyses revealed that being high identifier did not significantly predict implicit attitudes in the exposure group, compared to the control group, in contrast to Hypothesis 7a and Hypothesis 7b. Being high identifier is not significant predictor of implicit stereotyping or implicit prejudice in the exposure group. I explored the

femininity and masculinity orientations of employees as well as being androgynous (high femininity-high masculinity; Bem, 1974). None of the predictors was significant across the groups. One exception is, the femininity orientations of males were significantly predicting higher implicit stereotyping (Phase 2, controlling for Phase 1) in the exposure group, compared to the control group. This finding is not in accord with previous studies (e.g., Joshi, 2014; Heilman & Haynes, 2005; Wood & Eagly, 2015) which argued that high identification with one's own gender role increase the saliency of the target person's gender and therefore lead to higher likelihood of perceived breach of prescriptive gender norms. Instead, I found that being male with feminine orientation predicted weakened mental associations of female and leadership in the organizational context. This is in line with higher implicit stereotyping tendencies of female respondents compared to males at Phase 2 controlling for Phase 1 measures. Considering the saliency argument (Joshi, 2014), I suggest that the gender of the woman manager might be more salient to females and males with high feminine orientation. They might attend more to the leader gender at work, which might further strengthen the perceived incongruence between female and leadership roles at the immediate work context over time (Eagly & Karau, 2002). Future studies should empirically examine whether high gender identity versus being female or having higher feminine orientation increase the perceived saliency of leader gender and therefore the automatic stereotypic tendencies against female leadership.

5.6.Conclusion, Limitations and Future Directions

The present study and the empirical findings contribute to the management literature by adopting and testing the diverse range of socio-cognitive and role theories to explain the malleability of implicit stereotyping and implicit prejudice toward female leadership. I based on two follower-centric and dynamic theories of leadership – i.e., the role congruity theory and implicit leadership theories – to explain the mechanisms of stereotypes and attitudes toward female leadership at work context. In order to explain stereotypes and prejudices following exposure to a counter-stereotypic figure (female leader), I compared the arguments of intergroup contact theory and the associative-propositional evaluation (APE) model versus the backlash effect

arguments. Current findings contribute to the leadership literature by integrating the theoretical arguments based on the optimal conditions of contact hypothesis (Allport, 1954/1979; Pettigrew, 1998; Pettigrew & Tropp, 2006), the generalization argument of the APE model (Gawronski & Bodenhausen, 2011; Gawronski & Sritharan, 2010; Rydell & Gawronski, 2009) as well as the backlash arguments (Rudman & Glick, 2001).

One main contribution of the current work to the leadership literature is the initial evidence that working under the authority of women's management may not readily challenge prevailing implicit stereotypes and implicit prejudice for all employees. I found overall stability of implicit prejudice toward female leadership and weak evidence of change in the contextualized implicit stereotyping toward female leadership across three phases in the exposure group, compared to the control group. Together, the findings on implicit stereotyping may imply contextualization (Gawronski & Bodenhausen, 2011; Gawronski & Sritharan, 2010; Rydell & Gawronski, 2009), yet the validity of such a finding is questionable due to problems in the measure of implicit stereotyping (GL-IAT). The overall implicit prejudice decreased both for the exposure group and for the control group. This does not discard or totally support the mere exposure argument (Pettigrew & Tropp, 2006), because it is not clear whether exposure to a female mayor is sufficient to decrease implicit prejudice against female leadership even for the control group, or not. Future studies should examine both direct as well as indirect ways of exposure to women occupying top authority positions in organizations.

These findings are also in contrast to past findings of longitudinal field studies on female leadership revealing overall malleability of stereotypes/prejudices (Beaman et al., 2009; Dasgupta & Asgari, 2004). As Lai and colleagues (2013) highlighted, publication biases favoring the report of significant results might be partially responsible for the past findings demonstrating the malleability of implicit attitudes in general. There are very limited number of field studies examining the malleability of stereotypes and prejudice toward female leadership in general, and fewer at the implicit domain. It would be interesting for future studies to conduct meta-analyses on the published and unpublished field studies to test the mere exposure effect on the implicit stereotyping and implicit prejudice toward female leadership.

The second main contribution is the individual and relational conditions of changes in implicit stereotyping and implicit prejudice toward female leadership. The perceived success of the leader, leader's perceived agency, the quantity and quality of interaction with the leader and employee gender and gender identity influence how implicit stereotyping differ following a 9 to 12 month exposure to a female leader. On the other hand, the perceived success of the leader, the perceived agency of the leader, the quality of interaction with the leader and employee gender seem to play role in the change trajectory of implicit prejudice toward female leadership following a 12 to 15-month exposure to a female leader.

The pairing of female leader exposure and positive experiences reduces implicit prejudice and implicit stereotyping toward female leadership. This supports the optimal conditions argument of intergroup contact theory (Allport, 1954/1979; Pettigrew, 1998; Pettigrew & Tropp, 2006) and the APE model (Gawronski & Bodenhausen, 2011; Gawronski & Sritharan, 2010; Rydell & Gawronski, 2009). First, the reduction of implicit stereotyping as well as implicit prejudice following exposure to a female leader was a function of the LMX quality (affect and respect), especially for female employees. This difference in the type of positive experience suggests that females were more concerned with having a female leader that they like personally and respect professionally. This helped reduce their implicit prejudice toward the broader group of female leaders. Second, implicit stereotyping and implicit prejudice diminished through positive experiences about organizational performance. Female leader's success on internal affairs (such as human resource management and her overall ability to manage organization) decreased implicit stereotyping of males after a 9 to 12 month of exposure. Whereas, their success on strategic issues such as budgeting and services/products provided to customers (e.g., citizens) lowered implicit prejudice following a 12 to 15 month exposure. This difference in the type of performance indicators integrates the predictions of the optimal conditions of intergroup contact theory, APE model as well as the female advantage arguments in the backlash effect. Employees might have had clear knowledge on internal affairs, observed success of the leader and therefore experienced diminishing implicit stereotyping. They might have rationalized the female leader's success by attributing her contributions on strategic issues and public affairs to external events at Phase 2 and therefore these indicators did not challenge implicit stereotyping. At phase 3,

through the acquisition of more knowledge on the strategic issues and public services of the organization, employees seemed not to rationalize the leader success in any of the performance dimensions anymore and therefore experienced lowered implicit prejudice.

The pairing of female leader exposure and her agentic as well as communal characteristics had a contradictory impact on implicit stereotyping and increased implicit prejudice. High agency and high communality creates an advantage to the female leader. This supports the female advantage argument based on the role congruity theory and the backlash effect (Eagly & Carli, 2003; Johnson et al., 2008; Rosette & Tost, 2010). High agency is congruent with a leadership role, whereas high communality does not violate prescriptive gender norms. Therefore, first time exposure to a female mayor with balanced agentic and communal characteristics lowered the implicit prejudice. Leader agency measured as the aggregate score at the organizational level similarly lowers implicit prejudice. High agentic female leader might signal an effective leader image, challenging prejudice as the APE model and ILTs approach would claim. In contrast, the perceived agency of the female leader in the eyes of employees seems to breach the prescriptive gender norms, creating backlash effect (Rudman & Glick, 2001). This increases the implicit prejudice toward female leadership.

A third key finding is that the determinants of change in implicit stereotyping and implicit prejudice toward female leadership are different for male and female employees. The present findings suggest that while a successful and agentic female mayor influences male employees, the frequency and quality of their interactions with their female mayor play role in female employees' implicit attitudes toward female leadership. Male employees are becoming less automatically prejudiced toward female leadership in general, if they attribute higher success to their organization and therefore to their female manager. Male employees seem to acquire a more pleasant positive image of female leadership following the cumulated positive experiences through organizational success and agentic traits of female leaders. Hence, the predictions of the moderating effect of success and agency based on the intergroup contact theory and the APE model are relevant to male employees rather than females. In contrast, female employees are becoming less prejudiced and less stereotypic under the conditions of quantity of communication and high exchange with the female

leader. Female employees' implicit attitudes toward female leadership seem to benefit more from positive experience through frequent and high affective exchange with their female leader. Employees' reactions to female leadership need to be evaluated according to their gender, separately and in comparison with each other in future research.

The current empirical setting has provided fruitful opportunities to examine the proposed research model. First, unlike most business organizations, municipalities usually have male mayors. Therefore, the municipal elections enable a natural condition for first time exposure to a female mayor at work. Second, exposure to the female mayor started at similar weeks across municipalities. Third, it provides a conservative test on the effect of exposure on the implicit stereotypes and implicit prejudice toward female leadership. It was very challenging to observe any change in implicit attitudes toward female leadership in the municipality context of Turkey where gender inequality is pervasive and culturally accepted (Kabasakal et al., 2011; Sümer, 2006; World Economic Forum, 2014). Hence, any significant finding and the verification of specific predictions in the municipality might be more likely to occur in other organizational contexts where women are represented more frequently in authority positions (such as education sector, World Economic Forum, 2014) and organizational cultures where the gender equality values are prevalent.

The longitudinal field study design with a control group partly enabled the interpretation of the real life effects of exposure to female leadership on the implicit attitudes toward female leadership. The repeated measurement and the case of municipalities after local elections permitted the temporal precedence of first time exposure to a woman municipality mayor. Employees in the exposure group as well as in the control group have not worked under the authority of a female mayor in the district municipality or in the metropolitan municipality before. Only the employees in the exposure group have been exposed to a female mayor after the March 2014 elections. Less ambiguity in the temporal precedence of exposure might have eased the causal inference (Shadish et al., 2002) on the malleability of implicit stereotyping and implicit prejudice toward female leadership.

5.6.1. Limitations and future research directions

Despite of these theoretical and empirical contributions, the current research findings should be interpreted with some critical limitations in mind. First, the correlational nature of our study limited the causal inference. Although the longitudinal design might allow the temporal relationship between the exposure and change in implicit attitudes, the study lacks a random assignment (Shadish et al., 2002). Mayors were not randomly appointed to municipalities, or, employees were not randomly assigned to exposure group versus control group.

An alternative explanation arises: women mayor candidates might be elected at municipalities where municipality officers were more prone to accept women's authority. I did not have the opportunity to measure civil servants prior to the March 2014 local elections. A pre-test in the design (Shadish et al., 2002) could have partial out true baseline differences of all employees on implicit attitudes toward female leadership prior to elections. Despite of the lack of pre-test assessment, Phase 1 level of implicit attitudes did not significantly differ across exposure group versus control group. This refuted Hypothesis 1a, yet partially overcame this explanation by providing a support to the similarities of employees on implicit attitudes toward female leadership, at least, at Phase 1. Yet, another alternative explanation remains. Regardless of their baseline attitudes, employees of the exposure group might have been more prone to or *ready to change* their attitudes toward female leadership over time. Some characteristics of the current research context and research design partially overcome causality inference problems arising from non-random assignments and the lack of pre-test measurement. Studies on local management in Turkey suggested that central political offices (e.g., political parties) play major role in the nomination of candidates for local management (e.g., Bayraktar & Altan, 2012). Centrally located political actors dominate the determination of the lists of municipality mayor candidates (compared to local employees or decision makers). The literature on the local management in Turkey (e.g., Bayraktar, 2007, Bayraktar & Altan, 2012; Kalaycıoğlu, 2007; Kalaycıoğlu, 2015) and personal communications with political science scholars (e.g., E. Kalaycıoğlu, personal communication, Sept. 21, 2015; U. Bayraktar, personal communication, Oct. 27, 2014) revealed almost no control of municipality employees over mayor candidates. Municipal employees' readiness for a

female mayor was argued as not a prior concern of centrally located political actors. Such a condition might partially overcome problems arising from the non-random selection of women municipality mayors.

I utilized a matched control group (Shadish et al., 2002) with an aim to equalize the employees' proneness to change implicit attitudes toward female leadership after exposure. Each municipality in the exposure group had a matched counterpart in the control group, in terms of, political parties (Bayraktar, 2007; Matland & Tezcür, 2011), municipality location (the metropolitan city, an urban settlement; Judge & Livingston, 2008), district level population size, the gender composition of the district population and the municipality council. The exposure group and the control group did not differ in terms of socio-demographics of employees. Similar district characteristics, municipal characteristics and employee characteristics may have reconciled general attitudes toward women at work prior to exposure. Additionally, the matched group might have partially accounted for history effects (Shadish et al., 2002), such as societal events about women's role in the management and politics that co-occurred between the beginning of election and the end of Phase 3 assessment. Although the control group accounts for co-occurring societal events, these events such as the mass media reports on women's leadership in municipalities might have confounded and threatened the interval validity. As discussed before, the decreasing trajectory of implicit prejudice in both groups might be result of an indirect exposure of the control group to the real life image of female mayor through mass media covers. Future longitudinal studies should control for this effect by assessing employees' exposure to the female leader figure not only through being employee of her organization, but also through employees' indirect contact through press and social media.

Second, the study also lacks the random selection of municipalities as well as employees, potentially limiting the conclusions about cause and effect relationships (Shadish et al., 2002). As I thoroughly explained in the sampling section of the Methodology chapter, I determined the inclusion criteria prior to the selection of municipalities (e.g., municipality districts) and employees (e.g., being a civil servant). Note that not all eligible municipalities or employees accepted the invitation for the volunteer participation in the study. The volunteered municipalities and employees might not necessarily differ from other eligible municipalities in terms of attitudes

toward women's leadership. This was partly because the informed forms sent to the municipalities and provided to employees did not imply any word on the current focus of women's leadership. Rather than cultural norms and attitudes toward women or women's leadership, my indirect and social ties in the local district or political actors in the metropolitan cities played the major role in municipalities' willingness or reluctance to participate. In most cases, municipalities first either rejected or did not respond to my invitation, but then accepted it with the help of a centrally located political actor in their affiliated party or an acquaintance within the council of the municipality. Hence, municipality's willingness or reluctance to participate did not necessarily reflect bias in favor of baseline level positive attitudes toward female leadership. However, the municipality sample was not still, for example geographically, representative of the population of municipalities in Turkey.

In terms of employee selection procedure, the field observations and informal communication with key informants in the municipalities revealed that volunteering to a scientific study or participating in an attitude assessment was not a common practice in municipalities. This factor was not necessarily related to the gender of the mayor, yet it could be determined by employees' education level. Indeed, the majority of respondents graduated at least from a higher educational institution in the exposure group, 74.2% and in the control group, 66.2%. Hence, we should be careful to generalize the findings to employees or specifically employees with high school or less education. In order to avoid the limitations arising from the random selection and random assignment, I highly recommend an experimental longitudinal field study to test the current research model and hypotheses. Only in an experimentally controlled field setting, we can confidently infer causal impact of exposure to a female leader on the implicit stereotyping and implicit prejudice toward female leadership.

Third limitation concerns with respondent attrition, which was an inevitable yet potentially bias inducing factor in most longitudinal studies (Graham, 2009; Hair et al., 2010; Ployhart & Vandenberg, 2010; Schafer & Graham, 2002; Shadish et al., 2002). In the present study, the sample size remained acceptable at Phase 3 (n = 208). The sample size decreased from first time municipality visits (n = 147 for the exposure group, n = 160 for the control group) to the second time municipality visits (n = 90 for the exposure group, n = 108 for the control group) with an attrition rate of 21.74 % (24.37% for the exposure group, 19.40% for the control group). I, therefore, sampled

additional participants from the municipalities of exposure group (n = 28) and the control group (n= 26). Detailed attrition analyses revealed no systematic missingness in terms of outcome variables and no significant shifts in the composition of the groups in terms of employee and municipality characteristics after participant additions at the second visit and dropouts at each phase. My field notes also revealed that dropouts were mostly due to varying work overloads at departmental level and problems of logistics during the data collection. These findings and observations refuted any bias due to attrition (Shadish et al., 2002).

Fourth, we need to question the generalizability of findings to other organizations in the world and to employees in other organizational settings of Turkey. Would I observe similar findings within organizations embedded within other cultures and institutional environments? The sampling employees from Turkish local management constituted a conservative case (George & Bennett, 2005) where the effect of exposure to women leader on the implicit attitudes toward female leadership would be less likely to occur. Therefore, we might expect decreasing levels of implicit stereotyping and implicit prejudice toward female leadership in less conservative organizational cultures and even societal settings. In other organizations and societies where cultural norms are dictating gender egalitarian values, the change process might be even shorter across employees.

The generalizability of current findings is also restricted by the municipality characteristics and the sample size. The municipality sample is limited to 11 district municipalities of metropolitan cities located on western geographic regions – Marmara, Aegean and Central Anatolia of Turkey. The sampling of employees from only western regions of Turkey and *metropolitan areas* – i.e., urban settlement – may have assured a relatively more liberal approach in terms of traditional gender roles (Judge & Livingston, 2008). Such a choice might ease the change of implicit stereotypes and implicit prejudice toward female leadership. One may find higher resistance to change in implicit attitudes against female leaders in organizations from culturally less liberal geographical regions and cities in terms of gender equality. Besides, the size of the exposure group and the control group decreased across phases. Even though the attrition did not alter the groups' socio-demographic composition and the final sample sizes are sufficient for trajectory analyses (Chan, 1998; McArdle, 2009; Preacher, 2010), decrease in the sample size limited the statistical conclusion

validity and the generalization of particularly non-significant findings (Shadish et al., 2002). The criteria of being civil servant with an organizational tenure of at least 18 months largely restricted my target sample at the beginning. The objective of selecting only civil servants was to ensure the psychological security of respondents during the attitude assessment, given that civil servants are permanent employees of municipalities. My field observations, indeed, indicated that other employees (contracted white collars or blue-collar workers) would not be comfortable with evaluating their mayor or expressing their true thoughts/feelings at self-report scales at similar degrees in the exposure group and in the control group. Yet, most municipalities utilize contracted employees nowadays. Future studies can utilize a more heterogeneous and larger sample size by additionally sampling the contracted white-collar employees as well as blue-collar workers of municipalities at baseline measurement. Moreover, even if I tried to reach every participant in subsequent phases, the variations in the workloads of departments mainly limited my access to participants, resulting in unforeseen dropouts. Future longitudinal studies in the municipality field should target a very larger employee sample to compensate varying dropout rates due to the seasonal workloads of municipalities.

Fifth, the total data collection period of 12 to 15 months might not enable the observation of gamma change in implicit prejudice, or the mediating effects of implicit stereotyping and leadership prototypes. Due to the lack of empirical evidence on the trajectory of implicit prejudice toward female leadership, I assessed employees with 3-month intervals and within a one-year period in order to capture finer within person variation in implicit prejudice. Such an operationalization of time was recommended in cases where the time intervals of the repeated measurement were not empirically anticipated (Collins, 2006; Zaheer et al., 1999). The trajectory of implicit attitude toward female leadership was not studied before. The existing two longitudinal studies compared implicit attitude scores obtained at the beginning of exposure and at around two-four years (Beaman et al., 2009) and at around one-year (Dasgupta & Asgari, 2004). The longitudinal field study of Beaman and colleagues (2009) reported decreasing implicit prejudice toward female leadership 2 to 4 years after the random appointment of women to village councils in India. Dasgupta and Asgari (2004) reported change in implicit stereotyping after one year of contact with women's college environment. However, their empirical settings (Indian villages and women

colleges, respectively) were different from work setting where employees experienced more intense interactions with the mayor on daily basis. For example in the Indian village setting (Beaman et al., 2009), most of the citizens did not know the female council members, unlike the current municipality setting. In the present study, working under the authority of women mayor and observing her behaviors/decisions on daily work life would intensify the mere exposure effect. It would be very interesting for future studies investigate the effect of first time exposure to a female leader at work on the trajectory of implicit prejudice toward female leadership in an extended observation period (more than 12 to 15-month). Considering Beaman and colleagues' (2009) report, future studies can repeatedly measure stereotypes and prejudice toward female leadership within 2 to 4 year periods. Besides, the present study adhered to three time points that are necessary for proper estimation of LGM (Chan, 1998; Preacher, 2010; Selig & Preacher, 2009). However, complex patterns of trajectories (e.g., quadratic trends) might be captured with four or five time points. Future research can examine complex change trajectories of implicit stereotyping and implicit prejudice by increasing the number of observations.

Sixth, despite the self-report instruments demonstrated reliability and validity, I assessed the characteristics of the mayor and employees' interactions with him/her only from the perspective of employees. The assessment of employee perceptions was consistent with the theoretical arguments and the hypotheses. However, the data could have been triangulated with women mayors' own evaluations about their agentic-communal characteristics and their perceived quality of relationship with employees, as well as the objective indicators of mayor performance. I could not measure the mayors' self-assessment on agentic-communal characteristics, because I did not get access to municipality mayors in the sample. Private Secretary Office of mayors usually interacted with me on behalf of mayors. Furthermore, I could not triangulate the perceived success with the objective performance indicators of mayors or the municipalities, such as annual municipality performance. This is partly because, first, there is not a specific indicator of mayor success in the performance program of municipalities (Municipal law no: 5393, 2005; the head of strategic planning unit of Üsküdar municipality, personal communication, 20 July 2014). As Köseoğlu (2008; personal communication, July 22, 2014) indicated, the municipality performance can be a valid indicator of mayor performance. Second, mayor is the legal representative

who is accountable on the municipality performance in terms of budgeting, but also the quality and the quantity of services/products provided to the public and employees. Hence, the municipality performance indicators such as annul profits may not necessarily reflect the actual performance and success of municipalities (Köseoğlu, 2008). Third, although each municipality should publicly announce their strategic plans and their performance indicators, more than half of the sampled ones do not publicly share (and did not volunteer to share) their performance indicators. It would be very interesting for future research to incorporate women leaders' self-assessments on agentic-communal characteristics, in predicting the change in employees' implicit stereotyping and implicit prejudice.

Lastly, I have predominantly focused on the implicit forms of attitudes toward female leadership at work and therefore theorized about the malleability of attitudes at associative process level in the light of the APE model (Gawronski & Bodenhausen, 2011; Gawronski & Sritharan, 2010). Future research can augment the current research model by theorizing about the employees' motivation to change their attitudes (e.g., Wyer, 2016) as well as the propositional processes (Gawronski & Bodenhausen, 2011). Past research highlighted that implicit attitudes may resist to change when there is a high motivation to draw conclusion from limited information (e.g., Wyer, 2016). Some people may have an immediate tendency to conform stereotypes without effortful thinking about contextual information (e.g., Wyer, 2016). The matched design and therefore similar socio-demographics of employees such as education level might have partially balanced the level of motivation to change attitudes[15]. Yet, it would be fruitful to examine the role of employees' motivation to change on the malleability of implicit stereotypes and implicit prejudice toward female leadership in the future research.

Employees' motivation to change their attitudes might be triggered by the propositional processes and therefore such an attitude might indirectly alter the implicit level attitudes (see, the propositional processes in the APE model; Gawronski & Bodenhausen, 2006; 2011). My field observations revealed that employees in the exposure group and those in the control group had similar contextual opportunities to elaborate on their prejudice and stereotypes toward female leadership. It would be

[15] I was extra cautious in order not to motivate employees to change their thoughts. I explained the repeated assessment as a validity check of my measures.

fruitful to examine the variations among organizations in term of activities (e.g., in-service trainings) that intentionally try to reconstruct employees' understanding and beliefs on gender equality at work context. Such activities can lay the ground for employees' effortful thinking and elaboration on their thoughts about women's leadership. Women managers' and organizations effortful strategies to highlight gender issues and to form positive image about female leadership might increase the salience of exposure effect (Rudman et al, 2012). Hence, it would advance the current theoretical arguments and be practically very informative to examine the effortful processes of employees through examining their personal cognitive tendencies and motivation to change their thoughts as well as organizational activities/interventions on employees' biased/prejudicial attitudes toward women in management.

Despite of these limitations, by focusing on automatic and unconscious level attitudes, the current dissertation study contributes to the understanding of employees' stereotypic and prejudicial attitudes toward female leadership. Few studies have examined change in employees' attitudes toward leadership in general and female leadership in particular. The current study tests the diverse theoretical views on how first time and real life exposure to a female leader influences employees' organizational context dependent implicit stereotyping and implicit prejudice toward female leadership.

5.6.2. Practical implications

The current evidence on the change in automatic stereotyping toward female leadership and implicit prejudice toward female leadership has practical implications for organizational decision makers and female leaders themselves. Current results can particularly contribute to debates on gender quotas and task forces on gender equality in organizational settings, although the appointment of women mayors to district municipalities is not random but is achieved through elections. This is particularly relevant for organizations in Turkey given that task forces such as the Equality at Work Platform were launched to decrease the discriminations against women in the workplaces in Turkey (World Economic Forum, 2015). One of the basic assumptions of gender quota policies as well as workforces is that gender quotas and gender

diversity can improve the general attitudes toward female leadership and therefore decrease discrimination against females in authority positions (Pande & Ford, 2011). Beaman and colleagues' (2009) experimental field study in Indian village councils supports the beneficial role of gender quota in general. Yet, to the extent of my knowledge, no study has tested this assumption in terms of employee attitudes toward female leadership within a work context. The present findings entail that women's occupation of high authority positions does not necessarily alter employees' implicit stereotyping and implicit prejudicial attitude toward female leadership. The policy makers and organizational decision makers should pay attention to how a target group of male and female employees perceive women leaders' (or, candidates) characteristics such as agentic behaviors, their success as leaders and their interactions with employees. An agreement of employees on the agentic characteristics of a female leader and the employees' perceived success of the female leader seem as critical determinants of decreasing implicit stereotyping and implicit prejudice against female leadership especially for male employees. Positive and frequent interaction with the female leader is particularly important determinant of change in female employees' implicit stereotyping and implicit prejudice.

These findings have implications for leadership development programs and female managers themselves. Leadership programs should entail skill tools designed specifically to develop leadership abilities of woman managers. Female managers should acquire knowledge and skills on balancing their agentic as well as communal leadership characteristics to challenge employees' automatic stereotyping against them and female leadership. They should show a moderate level of agentic behaviors in their daily decisions and interactions with employees. Their agentic behaviors should be high enough to be attributed as leaders but low enough not to breach the prescriptive gender norms of employees and the organization. Moreover, female managers should pay attention to spend time on their personal communications with particularly female employees. During their interactions with employees, they should be more cognizant of their high affective and professional exchange with employees. By paying attention to their behaviors, characteristics and the personal interactions in the eyes employees, female managers can be active agents of change in employees' implicit stereotyping and implicit prejudice toward female leadership.

APPENDICES

Appendix A.

Metropolitan District Municipalities with Women Mayors Selected for the First Time in March 2014 Local Elections (Mahalli İdareler Genel Müdürlüğü, 2014a; Metropolitan district municipalities, 2015)

Province - District	Political Party	Vote ratio	Second highest party	Vote ratio for the second highest party	2013 District municipality population - female	2013 District municipality population - male
Ankara-Güdül	AKP	40.37 %	MHP	20.79 %	4589	4322
Ankara – Kalecik*	AKP	56.69 %	MHP	21.43 %	6800	6878
Eskişehir - Mihalgazi	AKP	43.74 %	MHP	24.71 %	1778	1705
Konya - Meram	AKP	70.73 %	MHP	16.16 %	167917	166071
Denizli – Bozkurt*	CHP	36.24 %	MHP	31.98 %	6657	5622
İstanbul-Avcilar*	CHP	44.03 %	AKP	40.89 %	202336	204904
İzmir - Urla	CHP	44.43 %	MHP	21.37 %	27774	28977
İzmir – Konak*	CHP	46.91 %	AKP	30.94 %	197475	188368
İzmir – Kiraz*	MHP	32.97 %	AKP	29.28 %	21855	22162
Diyarbakir-Hazro	BDP	67.13 %	AKP	23.31 %	8501	8719
Diyarbakir-Silvan	BDP	69.55 %	AKP	22.37 %	42780	43313
Mardin - Dargeçit	BDP	60.16 %	AKP	33.53 %	14576	14315
Mardin - Mazidağı	BDP	61.71 %	AKP	26.74 %	16346	16737
Van - Edremit	BDP	50.91 %	AKP	41.82 %	51997	53509
Van - Erciş	BDP	49.40 %	AKP	42.8 %	82155	87969
Van - İpekyolu	BDP	60.19 %	AKP	57.19 %	136074	138828
Van - Özalp	BDP	71.62 %	AKP	25.62 %	35855	37158

*Municipalities that accepted to participate in the current study.

Appendix B.

The Complete List of District Municipalities in Ankara, Denizli, İstanbul, İzmir and Their Characteristics (Mahalli İdareler Genel Müdürlüğü, 2014a)

Province	District	2013 District Population	Party	Municipality mayor's Name	Surname	Gender
Denizli	Acıpayam	55.971	AKP	Hulusi	Şevkan	Male
Denizli	Babadağ	6.707	AKP	Salim	Demirezen	Male
Denizli	Baklan	5.934	AKP	Yusuf	Gülsever	Male
Denizli	**Bekilli**	**7.751**	**CHP**	**Mustafa**	**Başkafa**	**Male**
Denizli	Beyağaç	7.116	AKP	Mustafa	Akçay	Male
Denizli	***Bozkurt***	***12.279***	***CHP***	***Birsen***	***Çelik***	***Female***
Denizli	***Buldan***	***27.558***	***CHP***	***Mustafa***	***Gülbay***	***Male***
Denizli	Çal	20.587	MHP	Fethi	Akcan	Male
Denizli	Çameli	19.315	AKP	Cengiz	Arslan	Male
Denizli	Çardak	9.386	AKP	Mahmut	Öztürk	Male
Denizli	Çivril	60.615	AKP	Gürcan	Güven	Male
Denizli	Denizli	963.464	AKP	Osman	Zolan	Male
Denizli	Güney	10.796	AKP	Halil	Ayhan	Male
Denizli	Honaz	32.324	AKP	Turgut	Devecioğlu	Male
Denizli	Kale	21.293	AKP	Erkan	Hayla	Male
Denizli	Merkezefendi	262.825	AKP	Muhammet	Subaşıoğlu	Male
Denizli	Pamukkale	311.496	AKP	Hüseyin	Gürlesin	Male
Denizli	Sarayköy	29.650	AKP	Ahmet Necati	Özbaş	Male
Denizli	Serinhisar	14.817	AKP	Mehmet	Kobaş	Male
Denizli	Tavas	47.044	AKP	Turhan Veli	Akyol	Male
Ankara	***Akyurt***	***28.349***	***AKP***	***Gültekin***	***Ayantaş***	***Male***
Ankara	***Altındağ***	***359.597***	***AKP***	***Veysel***	***Tiryaki***	***Male***
Ankara	***Ayaş***	***12.997***	***AKP***	***Bülent***	***Taşan***	***Male***
Ankara	**Bala**	**23.138**	**AKP**	**İbrahim**	**Gürbüz**	**Male**
Ankara	Beypazarı	47.234	AKP	Tuncer	Kaplan	Male
Ankara	Çamlıdere	7.181	AKP	Hazım Caner	Can	Male
Ankara	Çankaya	914.501	CHP	Alper	Taşdelen	Male
Ankara	Çubuk	83.449	AKP	Tuncay	Acehan	Male
Ankara	Elmadağ	43.873	AKP	Gazi	Şahin	Male
Ankara	Etimesgut	469.626	MHP	Enver	Demirel	Male
Ankara	Evren	2.995	AKP	Abdulkadir	Demirci	Male
Ankara	Gölbaşı	115.924	AKP	Fatih	Duruay	Male
Ankara	**Güdül**	**8.921**	**AKP**	**Hava**	**Yıldırım**	**Female**
Ankara	Haymana	42.566	DP	Özdemir	Turgut	Male
Ankara	***Kalecik***	***13.678***	***AKP***	***Filiz***	***Ulusoy***	***Female***
Ankara	Kazan	45.879	AKP	Lokman	Ertürk	Male
Ankara	Keçiören	848.305	AKP	Mustafa	Ak	Male
Ankara	Kızılcahamam	26.694	AKP	Muhittin	Güney	Male
Ankara	Mamak	568.396	AKP	Mesut	Akgül	Male
Ankara	**Nallıhan**	**29.797**	**AKP**	**İsmail**	**Öntaş**	**Male**
Ankara	Polatlı	117.393	MHP	Mürsel	Yıldızkaya	Male
Ankara	Pursaklar	123.857	AKP	Selçuk	Çetin	Male
Ankara	Sincan	484.694	AKP	Mustafa	Tuna	Male
Ankara	Şereflikoçhisar	34.577	AKP	Ferda	Polat	Male
Ankara	Yenimahalle	591.462	CHP	Fethi	Yaşar	Male
İstanbul	Adalar	16.166	CHP	Atilla	Aytaç	Male
İstanbul	Arnavutköy	215.531	AKP	Ahmet Haşimi	Baltacı	Male
İstanbul	***Ataşehir***	***405.974***	***CHP***	***Battal***	***İlgezdi***	***Male***
İstanbul	***Avcılar***	***407.240***	***CHP***	***Hanay Handan***	***Benli***	***Female***
İstanbul	Bağcılar	752.250	AKP	Lokman	Çağırıcı	Male
İstanbul	Bahçelievler	602.931	AKP	Osman	Develioğlu	Male
İstanbul	**Bakırköy**	**220.974**	**CHP**	**Bülent**	**Kerimoğlu**	**Male**
İstanbul	Başakşehir	333.047	AKP	Mevlüt	Uysal	Male
İstanbul	Bayrampaşa	269.677	AKP	Atila	Aydıner	Male
İstanbul	Beşiktaş	186.570	CHP	Murat	Hazinedar	Male
İstanbul	Beykoz	248.056	AKP	Yücel	Çelikbilek	Male
İstanbul	Beylikdüzü	244.760	CHP	Ekrem	İmamoğlu	Male
İstanbul	Beyoğlu	245.219	AKP	Ahmet Misbah	Demircan	Male

Province	District	2013 District Population	Party	Municipality mayor' Name	Surname	Gender
İstanbul	Büyükçekmece	211.000	CHP	Hasan	Akgün	Male
İstanbul	Çatalca	65.811	CHP	Cem	Kara	Male
İstanbul	Çekmeköy	207.476	AKP	Ahmet	Poyraz	Male
İstanbul	Esenler	461.621	AKP	Mehmet Tevfik	Göksu	Male
İstanbul	Esenyurt	624.733	AKP	Necmi	Kadıoğlu	Male
İstanbul	Eyüp	361.531	AKP	Remzi	Aydın	Male
İstanbul	Fatih	425.875	AKP	Mustafa	Demir	Male
İstanbul	Gaziosmanpaşa	495.006	AKP	Hasan Tahsin	Usta	Male
İstanbul	Güngören	306.854	AKP	Şakir Yücel	Karaman	Male
İstanbul	Kadıköy	506.293	CHP	Aykurt	Nuhoğlu	Male
İstanbul	Kağıthane	428.755	AKP	Fazlı	Kılıç	Male
İstanbul	Kartal	447.110	CHP	Altınok	Öz	Male
İstanbul	Küçükçekmece	740.090	AKP	Temel	Karadeniz	Male
İstanbul	**Maltepe**	**471.059**	**CHP**	**Ali**	**Kılıç**	**Male**
İstanbul	Pendik	646.375	AKP	Salih Kenan	Şahin	Male
İstanbul	Sancaktepe	304.406	AKP	İsmail	Erdem	Male
İstanbul	Sarıyer	335.598	CHP	Şükrü	Genç	Male
İstanbul	Silivri	155.923	CHP	Özcan	Işıklar	Male
İstanbul	Sultanbeyli	309.347	AKP	Hüseyin	Keskin	Male
İstanbul	Sultangazi	505.190	AKP	Cahit	Altunay	Male
İstanbul	Şile	31.718	AKP	Can	Tabakoğlu	Male
İstanbul	Şişli	274.420	CHP	Hasan Hayri	İnönü	Male
İstanbul	Tuzla	208.807	AKP	Şadi	Yazıcı	Male
İstanbul	Ümraniye	660.125	AKP	Hasan	Can	Male
İstanbul	Üsküdar	534.636	AKP	Hilmi	Türkmen	Male
İstanbul	Zeytinburnu	292.313	AKP	Murat	Aydın	Male
İzmir	***Aliağa***	***80.948***	***MHP***	***Serkan***	***Acar***	***Male***
İzmir	Balçova	77.624	CHP	Mehmet Ali	Çalkaya	Male
İzmir	Bayındır	40.690	CHP	Ufuk	Sesli	Male
İzmir	**Bayraklı**	**310.656**	**CHP**	**Hasan**	**Karabağ**	**Male**
İzmir	Bergama	101.217	CHP	Mehmet	Gönenç	Male
İzmir	Beydağ	12.555	CHP	Süleyman Vasfi	Şentürk	Male
İzmir	Bornova	426.490	CHP	Olgun	Atila	Male
İzmir	Buca	454.112	CHP	Levent	Piriştina	Male
İzmir	Çeşme	35.965	CHP	Muhittin	Dalgıç	Male
İzmir	***Çiğli***	***173.667***	***CHP***	***Hasan***	***Arslan***	***Male***
İzmir	Dikili	36.124	CHP	Mustafa	Tosun	Male
İzmir	Foça	32.534	CHP	Gökhan	Demirağ	Male
İzmir	Gaziemir	129.534	CHP	Halil İbrahim	Şenol	Male
İzmir	Güzelbahçe	27.389	CHP	Özdem Mustafa	İnce	Male
İzmir	**Karabağlar**	**471.676**	**CHP**	**Muhittin**	**Selvitopu**	**Male**
İzmir	Karaburun	9.092	CHP	Ahmet	Çakır	Male
İzmir	**Karşıyaka**	**321.870**	**CHP**	**Hüseyin Mutlu**	**Akpınar**	**Male**
İzmir	Kemalpaşa	97.499	AKP	Arif	Uğurli	Male
İzmir	**Kınık**	**28.000**	**AKP**	**Sadık**	**Doğruer**	**Male**
İzmir	***Kiraz***	***44.017***	***MHP***	***Saliha***	***Şengül***	***Female***
İzmir	***Konak***	***385.843***	***CHP***	***Sema***	***Pekdaş***	***Female***
İzmir	Menderes	77.706	AKP	Bülent	Soylu	Male
İzmir	Menemen	142.836	CHP	Tahir	Şahin	Male
İzmir	Narlıdere	63.743	CHP	Abdül	Batur	Male
İzmir	Ödemiş	129.295	AKP	A. Mahmut	Badem	Male
İzmir	Seferihisar	33.588	CHP	Mustafa Tunç	Soyer	Male
İzmir	Selçuk	34.979	AKP	Dahi Zeynel	Bakıcı	Male
İzmir	Tire	80.381	CHP	Tayfur	Çiçek	Male
İzmir	Torbalı	144.293	AKP	Adnan Yaşar	Görmez	Male
İzmir	**Urla**	**56.751**	**CHP**	**Sibel**	**Uyar**	**Female**

Note. Bold rows represent municipalities which I contacted and italics denote those which accepted my invitation.

Appendix C.
Informed Consent Form

Bilgilendirilmiş Onam Formu

Sayın Katılımcı,

Bu çalışma, Sabancı Üniversitesi Yönetim Bilimleri Fakültesi Doktora program öğrencisi Uzay Dural Şenoğuz tarafından Doç. Dr. Mahmut Bayazıt'ın danışmanlığında yürütülen "Türkiye'de iş yerinde liderlik algılamaları" konulu tez kapsamında yapılmaktadır.

Çalışmanın amacı, genel olarak iş yerinde liderlik özelliklerinin çalışanlar tarafından nasıl algılandığını ve bu algıların zaman içinde nasıl değiştiğini incelemektir.

Bu anlamda sizinle bugün, üç ay sonra ve altı ay sonra olmak üzere üç kere görüşme yapılacaktır. Her görüşmemizde genel olarak liderliği nasıl algıladığınız bilgisayar üzerinde basit bir test ile ölçülecektir. Ardından liderlikle ilgili düşüncelerinizi ve değerlendirmelerinizi daha ayrıntılı almak üzere bir anket doldurmanız istenecektir. Her görüşme yaklaşık 20 dakika sürecektir.

Kim olduğunuzu ve nerede çalıştığınızı belirtici hiçbir bilgi sizden talep edilmeyecektir. Bize vereceğiniz tüm bilgiler gizli tutulacak, kurum içinden veya kurum dışından kişilerle hiçbir şekilde paylaşılmayacaktır. Sizden alınan bilgiler sadece araştırma amacıyla kullanılacaktır.

Çalışma Sabancı Üniversitesi Etik Kurulu tarafından SOM-14-09 protokol numarası ile 03.11.2014 tarihinde onaylanmıştır. Görüşmeler katılımcıyı rahatsız edici sorular içermemektedir. Ancak, katılım sırasında sorulardan veya herhangi bir başka nedenden ötürü rahatsız hissederseniz araştırmacıya bunu iletebilirsiniz.

Çalışma hakkında daha fazla bilgi almak için Sabancı Üniversitesi Yönetim Bilimleri Fakültesi'nden Uzay Dural Şenoğuz'a uzaydural@sabanciuniv.edu ile veya 0533 – 4318810 ile ulaşabilirsiniz. Ayrıca danışman Doç. Dr. Mahmut Bayazıt'a mbayazit@sabanciuniv.edu ile iletişim kurabilirsiniz. Eğer onam formunun kopyasını size göndermemizi isterseniz lütfen e-mail adresinizi bize yazdırın. Hak ihlali olduğunu düşünüyorsanız Sabancı Üniversitesi Araştırma ve Lisansüstü Politikalar Direktörü Hasan Mandal'a (216) 483-9666 veya hmandal@sabanciuniv.edu ile ulaşabilirsiniz.

Bu çalışmaya katıldığınız için şimdiden teşekkür ederiz!

Bu çalışmaya tamamen gönüllü olarak katılıyorum ve istediğim zaman yarıda kesip çıkabileceğimi biliyorum. Verdiğim bilgilerin bilimsel amaçlı yayımlarda kullanılmasını kabul ediyorum.

Evet Tarih:

Appendix D.
Implicit Leadership Theories Scale

Lütfen aşağıdaki ifadelerin, *İDEALİNİZDEKİ* BELEDİYE LİDERİNİ ne oranda yansıttığını verilen ölçeği kullanarak değerlendiriniz. LÜTFEN HİÇBİR SORUYU BOŞ BIRAKMAYIN!

Hiç yansıtmıyor.			Ne yansıtıyor, ne de yansıtmıyor.				Tamamen yansıtıyor
1	2	3	4	5	6	7	

ILT1	Adaletli	1	2	3	4	5	6	7
ILT2	Akıllı	1	2	3	4	5	6	7
ILT3	Anlayışlı	1	2	3	4	5	6	7
ILT4	Bilge, alim	1	2	3	4	5	6	7
ILT5	Bilgili	1	2	3	4	5	6	7
ILT6	Çalışkan	1	2	3	4	5	6	7
ILT7	Cesur	1	2	3	4	5	6	7
ILT8	Destekleyici	1	2	3	4	5	6	7
ILT9	Dinamik	1	2	3	4	5	6	7
ILT10	Dürüst	1	2	3	4	5	6	7
ILT11	Duyarlı	1	2	3	4	5	6	7
ILT12	Eğitimli	1	2	3	4	5	6	7
ILT13	Enerji dolu	1	2	3	4	5	6	7
ILT14	Entellektüel, aydın	1	2	3	4	5	6	7
ILT15	Güçlü, sağlam	1	2	3	4	5	6	7
ILT16	Güvenilir	1	2	3	4	5	6	7
ILT17	Hoşgörülü	1	2	3	4	5	6	7
ILT18	İleri görüşlü	1	2	3	4	5	6	7
ILT19	İletişimi kuvvetli	1	2	3	4	5	6	7
ILT20	Karakter sahibi	1	2	3	4	5	6	7
ILT21	Kararlı	1	2	3	4	5	6	7
ILT22	Karizmatik bir kişilik	1	2	3	4	5	6	7
ILT23	Kendine güvenen	1	2	3	4	5	6	7
ILT24	Kendini işine adamış	1	2	3	4	5	6	7
ILT25	Mantıklı	1	2	3	4	5	6	7
ILT26	Motivasyonu yüksek	1	2	3	4	5	6	7
ILT27	Motive edici	1	2	3	4	5	6	7
ILT28	Objektif, duygularını işe karıştırmayan	1	2	3	4	5	6	7
ILT29	Otoritesini kullanabilen	1	2	3	4	5	6	7
ILT30	Profesyonel	1	2	3	4	5	6	7
ILT31	Samimi içten	1	2	3	4	5	6	7
ILT32	Şeffaf, açık sözlü	1	2	3	4	5	6	7
ILT33	Şefkatli	1	2	3	4	5	6	7
ILT34	Sevecen sempatik	1	2	3	4	5	6	7
ILT35	Sıcakkanlı	1	2	3	4	5	6	7
ILT36	Teşvik edici, cesaret veren	1	2	3	4	5	6	7
ILT37	Tutarlı	1	2	3	4	5	6	7
ILT38	Üretken	1	2	3	4	5	6	7
ILT39	Yardımcı	1	2	3	4	5	6	7
ILT40	Zeki	1	2	3	4	5	6	7

Appendix E.
Perceived Agency and Communality of the Mayor Scale

Aşağıdaki ifadelerin, ***MEVCUT*** belediyedeki belediye başkanını ne oranda yansıttığını verilen ölçeği kullanarak değerlendiriniz. LÜTFEN HİÇBİR SORUYU BOŞ BIRAKMAYIN, İLK AKLINIZA GELEN CEVABI İŞARETLEYİN!

Hiç yansıtmıyor.			Ne yansıtıyor, ne de yansıtmıyor.				Tamamen yansıtıyor
1	2	3	4	5	6	7	

PFM1	Adaletli	1	2	3	4	5	6	7
PFM2	Akıllı	1	2	3	4	5	6	7
PFM3	Anlayışlı	1	2	3	4	5	6	7
PFM4	Bilge, alim	1	2	3	4	5	6	7
PFM5	Bilgili	1	2	3	4	5	6	7
PFM6	Çalışkan	1	2	3	4	5	6	7
PFM7	Cesur	1	2	3	4	5	6	7
PFM8	Destekleyici	1	2	3	4	5	6	7
PFM9	Dinamik	1	2	3	4	5	6	7
PFM10	Dürüst	1	2	3	4	5	6	7
PFM11	Duyarlı	1	2	3	4	5	6	7
PFM12	Eğitimli	1	2	3	4	5	6	7
PFM13	Enerji dolu	1	2	3	4	5	6	7
PFM14	Entellektüel, aydın	1	2	3	4	5	6	7
PFM15	Güçlü, sağlam	1	2	3	4	5	6	7
PFM16	Güvenilir	1	2	3	4	5	6	7
PFM17	Hoşgörülü	1	2	3	4	5	6	7
PFM18	İleri görüşlü	1	2	3	4	5	6	7
PFM19	İletişimi kuvvetli	1	2	3	4	5	6	7
PFM20	Karakter sahibi	1	2	3	4	5	6	7
PFM21	Kararlı	1	2	3	4	5	6	7
PFM22	Karizmatik bir kişilik	1	2	3	4	5	6	7
PFM23	Kendine güvenen	1	2	3	4	5	6	7
PFM24	Kendini işine adamış	1	2	3	4	5	6	7
PFM25	Mantıklı	1	2	3	4	5	6	7
PFM26	Motivasyonu yüksek	1	2	3	4	5	6	7
PFM27	Motive edici	1	2	3	4	5	6	7
PFM28	Objektif, duygularını işe karıştırmayan	1	2	3	4	5	6	7
PFM29	Otoritesini kullanabilen	1	2	3	4	5	6	7
PFM30	Profesyonel	1	2	3	4	5	6	7
PFM31	Samimi içten	1	2	3	4	5	6	7
PFM32	Şeffaf, açık sözlü	1	2	3	4	5	6	7
PFM33	Şefkatli	1	2	3	4	5	6	7
PFM34	Sevecen sempatik	1	2	3	4	5	6	7
PFM35	Sıcakkanlı	1	2	3	4	5	6	7
PFM36	Teşvik edici, cesaret veren	1	2	3	4	5	6	7
PFM37	Tutarlı	1	2	3	4	5	6	7
PFM38	Üretken	1	2	3	4	5	6	7
PFM39	Yardımcı	1	2	3	4	5	6	7
PFM40	Zeki	1	2	3	4	5	6	7

Appendix F.

Quantity of Interaction Scale (Kacmar et al., 2003)

Lütfen iş yerindeki liderinizi (belediye başkanını) düşünerek aşağıdaki soruları cevaplayın.

Şimdiki belediye başkanı ile son seçimden önce beraber çalıştınız mı?	☐ Hayır ☐ Evet Evet ise ne kadar süre? _____
Belediye başkanını belediye dışında tanır mıydınız? (önceki iş yeri, akrabalık, komşuluk, arkadaşlık vb. gibi)	☐ Hayır ☐ Evet Evet ise ne kadar süre? _____
Belediye başkanı ile son seçimden sonra kaç aydır çalışıyorsunuz?_____	

Lütfen iş yerindeki liderinizi (belediye başkanını) düşünerek aşağıdaki soruları cevaplayın. Uygun rakamı YUVARLAK İÇİNE ALIN! LÜTFEN HİÇBİR SORUYU BOŞ BIRAKMAYIN!

	BELEDİYE BAŞKANI İLE İLETİŞİMİNİZİ DÜŞÜNÜN. ŞİMDİYE KADAR NE SIKLIKLA;	**Hiç**	**İki ayda bir/ daha az**	**3-4 haftada bir**	**İki haftada bir**	**Haftada bir**	**Haftada birkaç kez**	**Hemen hemen her gün**	**Her günde birkaç kez**
QUAN 1	… kendisini belediye içinde yakından/uzaktan görme fırsatınız oldu? (koridorda, bir etkinlikte vb.)	0	1	2	3	4	5	6	7
QUAN 2	… kendisi ile yüz yüzeselamlaştınız (bayramlaşma, tebrik vb.)	0	1	2	3	4	5	6	7
QUAN 3	…kendisiyle yüz yüze karşılıklı konuştunuz?(ayak üstü sohbet vb.)	0	1	2	3	4	5	6	7
QUAN 4	… kendisine siz e-posta yolladınız?	0	1	2	3	4	5	6	7
QUAN 5	…kendisinden e-posta aldınız?	0	1	2	3	4	5	6	7
QUAN 6	… kendisini telefonla aradınız?	0	1	2	3	4	5	6	7
QUAN 7	… kendisi sizi telefonla aradı?	0	1	2	3	4	5	6	7
QUAN 8	... kendisi ile toplantı yaptınız?	0	1	2	3	4	5	6	7

Appendix G.

Affect and Professional Respect Sub-Scales of LMX-MDM Scale
(Erdoğan et al., 2004; Liden & Maslyn, 1998)

Lütfen iş yerindeki liderinizi (belediye başkanını) düşünerek aşağıdaki soruları cevaplayın. Uygun rakamı YUVARLAK İÇİNE ALIN! LÜTFEN HİÇBİR SORUYU BOŞ BIRAKMAYIN, İLK AKLINIZA GELEN CEVABI İŞARETLEYİN!

		Hiç	Çok az	Ortalama	Çok	Tamamen
LMX1	Bu kişi herkesin arkadaş olmayı isteyeceği türde bir insandır.	0	1	2	3	4
LMX2	Bu kişi ile çalışmak zevklidir.	0	1	2	3	4
LMX3	Bu kişinin mesleki becerilerine hayranlık duyarım.	0	1	2	3	4
LMX4	Bu kişiyi insan olarak severim.	0	1	2	3	4
LMX5	İş yerindeki bilgi ve uzmanlığına saygı duyarım.	0	1	2	3	4
LMX6	İşine yönelik bilgisinden etkilenirim.	0	1	2	3	4

Appendix H.

The Perceived Interactional Justice Scale (Moorman, 1991)

Lütfen iş yerindeki liderinizi (belediye başkanını) düşünerek aşağıdaki soruları cevaplayın. Uygun rakamı YUVARLAK İÇİNE ALIN! <u>LÜTFEN HİÇBİR SORUYU BOŞ BIRAKMAYIN!</u>

	Kurumunuzdaki lider,	Hiç	Çok az	Ortalama	Çok	Tamamen
IJ1	Çalışana doğru ve içten davranır.	0	1	2	3	4
IJ2	Çalışana saygılıdır ve itibar eder.	0	1	2	3	4
IJ3	Çalışanın haklarını göz önünde bulundurur.	0	1	2	3	4
IJ4	Çalışanın ihtiyaçlarına duyarlılık gösterir.	0	1	2	3	4
IJ5	Çalışanlara nazik davranır.	0	1	2	3	4

Appendix I.

Perceived Organizational Performance Scale

BELEDİYENİN SON 3 AYINI DÜŞÜNÜN. Lütfen aşağıdaki ifadelerin, belediyeniz için ne oranda uygun olduğunu göz önüne alın. Uygun rakamı YUVARLAK İÇİNE ALIN!

Beklenenin çok altında. Daha çok geliştirilmesi gerekir.		**Beklenenin altında. Geliştirilmesi gerekir.**		**Beklenen düzeyde. Orta**		**Beklenenin üzerinde. İyi**		**Beklenenin çok üzerinde. Mükemmel**	
%10	**%20**	**%30**	**%40**	**%50**	**%60**	**%70**	**%80**	**%90**	**%100**

PERF 1	**Belediye çalışanlarının bilgi ve becerilerine uygun pozisyonlara yerleştirilmesi**	% 10	% 20	% 30	% 40	% 50	% 60	% 70	% 80	% 90	% 100
PERF 2	**Belediye çalışanlarının genel olarak bu belediyede çalışmaktan memnun olması**	% 10	% 20	% 30	% 40	% 50	% 60	% 70	% 80	% 90	% 100
PERF 3	**Belediye çalışanlarının genel olarak üstleriyle-müdürleriyle iletişimi ve ilişkilerinin kalitesi**	% 10	% 20	% 30	% 40	% 50	% 60	% 70	% 80	% 90	% 100
PERF 4	**Belediye gelir-giderlerinin verimli bir şekilde yönetilmesi**	% 10	% 20	% 30	% 40	% 50	% 60	% 70	% 80	% 90	% 100
PERF 5	**Belediye haklarının ve menfaatlerinin korunması**	% 10	% 20	% 30	% 40	% 50	% 60	% 70	% 80	% 90	% 100
PERF 6	**Belediye stratejilerinin/ faaliyetlerinin uygun şekilde önceden planlanması**	% 10	% 20	% 30	% 40	% 50	% 60	% 70	% 80	% 90	% 100
PERF 7	**Belediyede ilçe halkına yönelik yeni etkinlikler ve hizmetlerin getirilmesi**	% 10	% 20	% 30	% 40	% 50	% 60	% 70	% 80	% 90	% 100
PERF 8	**Belediyenin ilçe halkına sunulan kültürel, sportif ve sosyal hizmetlerin yeterliliği**	% 10	% 20	% 30	% 40	% 50	% 60	% 70	% 80	% 90	% 100
PERF 9	**Belediyenin ilçedeki temizlik ve atık/çöp toplama hizmetlerinin kalitesi**	% 10	% 20	% 30	% 40	% 50	% 60	% 70	% 80	% 90	% 100
PERF 10	**Belediyenin ilçedeki yol, park ve bahçe gibi hizmetlerinin kalitesi**	% 10	% 20	% 30	% 40	% 50	% 60	% 70	% 80	% 90	% 100
PERF 11	**Önceden yapılan planlara uygun faaliyetlerinin yerine getirilmesi**	% 10	% 20	% 30	% 40	% 50	% 60	% 70	% 80	% 90	% 100
PERF 12	**Belediye başkanının genel olarak belediyeyi yönetme ve idare etmesi**	% 10	% 20	% 30	% 40	% 50	% 60	% 70	% 80	% 90	% 100

Appendix J.

Bem Sex Role Inventory

(Bem, 1974; Dökmen, 1991; Özkan & Lajunen, 2004)

Lütfen aşağıdaki ifadelerin, sizin için ne oranda doğru ya da yanlış olduğunu, sizi ne oranda tanımladığını göz önüne alıp ilgili rakamı daire içine alarak belirtiniz.

Tamamen yanlış	Çoğunlukla yanlış	Biraz yanlış	Ne doğru ne yanlış	Biraz doğru	Çoğunlukla doğru	Tamamen doğru
1	2	3	4	5	6	7

BSRI1	Anlayışlı	1	2	3	4	5	6	7
BSRI2	Bağımsız / Dilediğini yapan	1	2	3	4	5	6	7
BSRI3	Baskın / Üstün / Hakim	1	2	3	4	5	6	7
BSRI4	Çocukları seven	1	2	3	4	5	6	7
BSRI5	Diğer insanların duygularını önemseyen	1	2	3	4	5	6	7
BSRI6	Düşünce ve inançlarını savunan	1	2	3	4	5	6	7
BSRI7	Duygularına hakim olabilen / Teskin edici	1	2	3	4	5	6	7
BSRI8	Duygusal	1	2	3	4	5	6	7
BSRI9	İddialı / Tuttuğunu koparan	1	2	3	4	5	6	7
BSRI10	İşe yarar ve becerikli	1	2	3	4	5	6	7
BSRI11	Kibar / Nazik	1	2	3	4	5	6	7
BSRI12	Lider / Liderlik özelliklerine sahip	1	2	3	4	5	6	7
BSRI13	Muhalif / Muhalefet eden	1	2	3	4	5	6	7
BSRI14	Risk alabilen / Risk almayı seven	1	2	3	4	5	6	7
BSRI15	Sağlam karakterli / Güçlü kişilikli	1	2	3	4	5	6	7
BSRI16	Saldırgan	1	2	3	4	5	6	7
BSRI17	Şefkatli / Merhametli	1	2	3	4	5	6	7
BSRI18	Sempatik	1	2	3	4	5	6	7
BSRI19	Sevecen / Sevgi dolu	1	2	3	4	5	6	7
BSRI20	Sıcakkanlı	1	2	3	4	5	6	7

Appendix K.
Employee Information Form (Çalışan Bilgi Formu)

Cinsiyetiniz:
- Kadın
- Erkek

Yaşınız:
- 18-24
- 25- 30
- 31-35
- 36-40
- 41-45
- 46-50
- 51-55
- 56 ve üzeri

Eğitim durumunuz:
- İlkokul
- Ortaokul
- Lise
- Yüksekokul
- Lisans
- Lisansüstü

Kaç ay/yıldır **BU belediyede** çalışıyorsunuz?
- 18 – 24 ay arası
- 2-5 yıl arası
- 5-10 yıl arası
- 10-15 yıl arası
- 15-20 yıl arası
- 20 yıl ve üzeri

Toplam kaç ay/yıldır genel olarak **belediyelerde** çalışıyorsunuz?
- 18 – 24 ay arası
- 2-5 yıl arası
- 5-10 yıl arası
- 10-15 yıl arası
- 15-20 yıl arası
- 20 yıl ve üzeri

Kaç yıldır **profesyonel iş hayatındasınız** (stajlarınız dahil, ücret karşılığında çalışma)?
- 18 – 24 ay arası
- 2-5 yıl arası
- 5-10 yıl arası
- 10-15 yıl arası
- 15-20 yıl arası
- 20 yıl ve üzeri

Birim amirinizin (müdürün) cinsiyeti nedir?

- Kadın
- Erkek

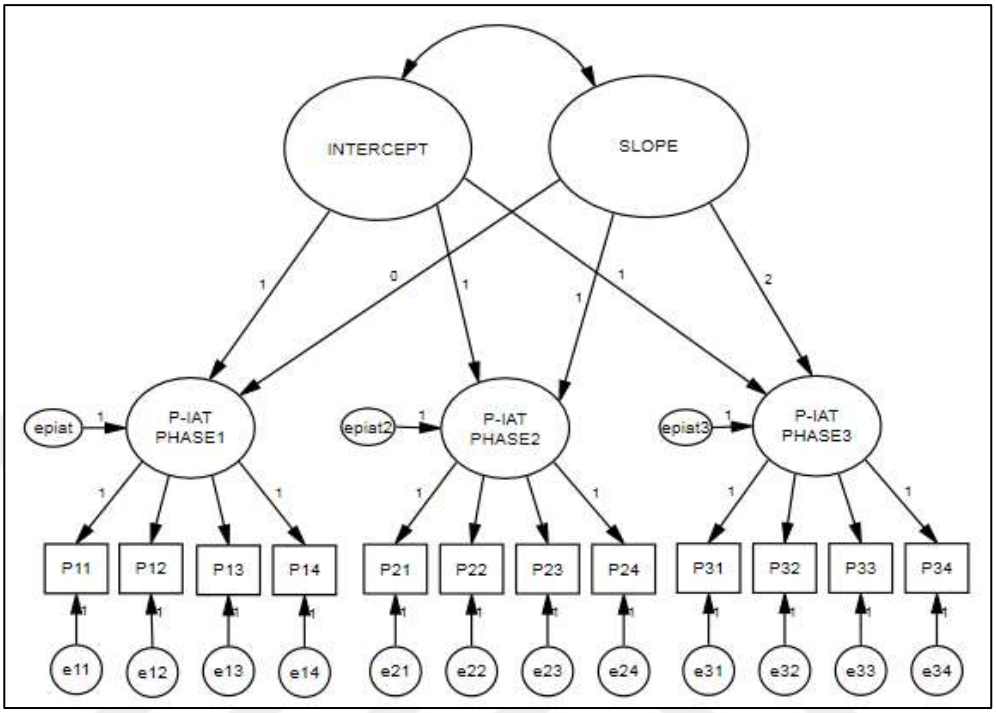
Kendisi ile ne kadar süredir çalışıyorsunuz? (ay/yıl) _____

D aha önce kadın bir yönetici İle çalıştınız mı?

- Hayır
- Evet → Evet ise TOPLAM ne kadar süre çalıştınız (ay/yıl)? _____

Appendix L.

A Path Diagram of Multiple Group -Multiple Indicator Latent Growth Modelling (MLGM) of P-IAT (Model 3)



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