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Linking Developmental Challenges to Academic Leadership Behaviors in Public University Context

Girma Mekuria Worku

Department of pedagogy, Arba Minch University, Arba Minch, Ethiopia
Email:girma.mekuria@amu.edu.et

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Abstract

This research aimed to investigate potential root causes of challenges that arise and explain what drives the development of academic leadership behaviors in Ethiopia's public university context. The authors employed a cross-sectional survey design to achieve the research objective. The study established 540 sample units using Cochran's (1977) sample size determination and correction techniques, and further employed a stratified random sampling technique to select the stated sample academic leaders from three bands of six public universities. Among the 540 questionnaire papers distributed to participants, 487 (90.2%) were properly filled out and submitted. The collected data was recorded, organized, and analyzed using Excel and STATA-12. The study employed multivariate regression analysis using STATA-12 to scrutinize if subordinates' developmental challenges were attributed to the development of immediate academic leaders' behaviors. As a result, the study investigated the selected potential challenges that accounted for the highest variation in explaining the deviation in instructional leadership behavior (R^2 = 0.16) compared to the variants in transformational (R^2 = 0.11), transactional (R^2 = 0.09), and laissez-faire (R^2 = 0.04) leadership behaviors. The multivariate regression analysis suggests that academic leadership behaviors in public universities are influenced by developmental challenges like novelty, innovation, questioning immoral acts, and taking risks. Thus, the rational challenge is a developmental tool to advance academic leadership behaviors. The policy makers need to rethink and re-formulate academic governance policy dimensions that provide faculty members legal opportunities to challenge superiors either to stop immoral academic governance or to promote innovative academic governance in the university context.

Keywords: *challenge; academic leadership; leadership behaviors; university; context*

1. INTRODUCTION

Scholars have pointed out challenges in leadership extension as forces for development (Carter et al., 2005; Giber et al., 2009; Kouzes& Posner, 2013, 2017; McCauley et al., 2010). Further, Yukl (2016) remarkably noticed followers' and leaders' dyadic relationships: challenge defective plans and proposals made by bosses, fight against inappropriate influencing attempts by the bosses, and provide upward coaching and counseling when appropriate. In addition, members representing various organizations and residing in various time zones and cultural contexts create more leadership challenges (Yukl, 2016). These conceptions of challenges usually reflect the challenging notions emphasized in the works of the mentioned scholars above and should work to advance academic leadership expansion where the quality of academic leadership competencies at operational and executive levels is nearly the same in an organization (Darth et al., 2008; McCauley et al., 2010). In this wisdom, the author emphasized investigating developmental sources of challenges, which are attributable to explaining complete academic leadership behaviors in Ethiopia's public university context.

If a challenge to leadership expansion is a development force, faculty members at universities should confront their immediate academic officials or leaders when they fail to uphold academic governance ethics. This should keep them safe from academic harm. Likewise, faculty challenges regarding academic officers' performance in terms of learning success improve academic leadership preparation more than those of other businesses whose line staff personnel have a wider range of work-related competencies than academic societies. This is because, in comparison to other civil organizations in the social sector, the work-related competencies of faculty members and their immediate academic leaders are almost the same at the academic work execution levels. Or else, even the academic officers, from the deans up to the chief executive officers (CEOs) of the university delivering courses, are responsible for the heads of the departments while delivering courses in Ethiopia's public university context.

Moreover, highly skilled and competent faculty members who are usually engaged in advanced academic work such as providing community services, lectures, research, and supervising graduate students at the Ph.D. level but do not hold academic officer positions. Accordingly, in Ethiopia's higher education system, subordinates may outperform superiors in terms of academic leadership qualities. For instance, in the current context of Ethiopian public universities, senior faculty

members typically have a higher academic rank or qualifications than their immediate academic officers. Similarly, earlier research on the difficulties and challenges facing academic governance was recognized in Ethiopia's HEIs (Berhanu, 2014; Asgedom, 2005; Ashcroft, 2004; Balsvik, 2009; Saint, 2004). However, the possible sources of challenges that account for the development of academic leadership behaviors have not yet been identified in the previous studies in Ethiopia's HEI context.

These academics brought attention to the main issues facing academic communities both inside and outside of public universities, and they even helped to change the political, social, and economic landscape of the nation as a whole. Among them, Berhanu (2014) examined the fundamental problems facing the social sciences, which present a chance to improve the standard of instruction, especially in postgraduate and staff development programs at Addis Ababa University (AAU). Berhanu (2014) identified several challenges, including the political climate that exacerbated the academic exodus, the cost-sharing policy, the 70/30 student deployment policy (30% social sciences and 70% engineering), and the university's inability to retain academic staff due to lower pay scales. However, due to the widespread criticism made by academic stakeholders, the 70/30 student deployment policy has been changed in Ethiopia's current education and training policy (MoE, 2023). Anyhow, because of the wide spread of academic stakeholders' challenges, the 70/30 student deployment policy has been reversed in the currently avowed Ethiopia's education and training policy (MoE, 2023).

Furthermore, in 2005, a distinguished academic at a public institution in Ethiopia angrily reflected to graduate students, of which the author was a member: "I am sorry; I have served for decades in teaching courses of education planning and management at a university that is unable to plan and manage itself." Spontaneously, the majority of the graduate students spoke out their supporting views with high and low voices. Nevertheless, one of the candidates replied loudly, in line with the voice of the professor.

> I am sorry for my admission to an institution that lacks the vital expertise to effectively design and oversee its educational administration. Sincerely, what can we learn from the shoddy planning and administration of academic programs in this sizable public university?

In the reflections, the trainer and the trainees have a common understanding that higher learning institutions produced educational managers for other learning institutions, but they ignored the value of academic planning and management for the success of their own HEIs. This is because the then-academic officers have partly failed to utilize their intellectual capital to plan and manage academic programs, while the university faculty members have produced graduates in education planning and management for other learning institutions. Nevertheless, the trainer and the trainees' reflections inform the emerging challenges against indifferent academic governance.

Moreover, at the time, Asgedom (2005), Ashcroft (2004), and Saint (2004) thoroughly examined the difficulties associated with academic governance in Ethiopia's public universities. The critics of these researchers demonstrate how a small amount of politically inserted academic governance impact on faculty development has impeded the implementation of massive higher education undertakings and great policy visions. Furthermore, the same issues have been reported, particularly with the implementation of summer in-service programs at Ethiopia's public colleges.

Instead of recognizing the various aspects of issues that present chances for improvement, scholars appear to perceive challenges in higher education as barriers to growth (Maitra, 2007). In this regard, challenges have been recognized as obstacles to the development of academic leaders in higher education. Unlike others, scholars noticed that challenges serve as a means for development, or else, as a driving force for development, establishing the conditions necessary for a leader to advance and become effective (Carter et al., 2005; Yukl, 2016). Moreover, when immediate leaders—such as CEOs—make poor decisions, others in the organization may challenge them. This is because challenging them to change their minds and make decisions that are in line with the organization's interests is an effective inducement for leadership progress (Yukl, 2010). According to McCauley et al. (2010), common sources of obstacles in this category include disagreement, hard goals, a lack of novelty, and adversity that influence the relationships between subordinates and superiors in one organization.

Among them, one of the hardest things to create as a leader is novelty (McCauley et al., 2010). This is because the most difficult sources of challenges might sometimes demand new abilities and perspectives. Essentially, if senior academic officers at public universities lack the necessary academic leadership competencies to alter their public HEIs, then neither the institutional

transformation initiatives nor its leadership development programs will contribute to its developing objectives. In addition, another source of challenges for leadership development is setting objectives, either alone or with others (Day, 2001; McCauley et al., 2010). It might be challenging to start an assignment from scratch. In this regard, leaders who go through the formal leadership development program may confront challenges in adjusting even their behaviors to adapt to the settings that allow them to work with groups successfully.

The authors also noted that conflict—with another person or with oneself—are common in a variety of situations, which presents a problem when it comes to leadership preparation (Carter et al., 2005; Giber et al., 2009; Yukl, 2016). For these scholars, outstanding thinkers view conflict as a motivating force that inspires individuals to embrace different viewpoints. Acquiring insight into other people's viewpoints might help establish goals, foster alignment, and secure support for the business. Accordingly, conflict as a source of challenge can be utilized as a developmental factor that may influence the improvement of leadership behaviors (Conger & Riggio, 2007; McCauley et al., 2010; Nikezić et al., 2012). In the same manner, the challenge can be defined as conflict among stakeholders to resolve problems in different ways, struggle towards empowerment that resists taking a personal stake in the work, and working in a complex environment (McCauley et al., 2010; Yukl, 2010). In this regard, conflicting challenges may be attributed to development forces, particularly in a university context where the academic leadership competencies between subordinates and superiors are nearly the same.

The writers also noted how challenges and difficulties play a role in development. According to Day (2001) and McCauley et al. (2010), people may give up on their developmental activities after dealing with losses, failures, and disappointments. This form can be confusing due to things like terminating a job in academia, making professional mistakes, breaking connections with academic stakeholders, and other similar situations. Similarly, Kouzes and Posner (2013) examined challenges that fall under the category of leadership development practices. These scholars witnessed that challenging the process contributes to the development of leadership behaviors with respect to authentic transformational leadership notions. The challenge is, in the authors' opinion, to obtain fresh perspectives that could enhance each leader's work and facilitate even more learning from difficult situations.

Besides, the relationship between leadership behaviors and challenges in leadership development has also been studied by scholars (Cooper et al., 2005; Kouze & Posner, 2017). Since followers and leaders share many leadership qualities, the challenging actions of followers may contribute to the expansion of the inventive component of leadership. In this regard, Darth et al. (2008) took into account the parallel comparison of the actions of leaders and followers as an indication of the expansion of leadership competencies inside an organization. In addition, connecting the competencies of individual leader growth with broader collective leadership development is one of the main challenges associated with developmental endeavors within the organization (Conger & Riggo, 2007). Moreover, Laguerre (2010) has raised the question of whether leadership theories help to develop leadership behaviors with respect to transformational leadership theories. Thus, to transform the problem into development forces, the academic leadership development program may look for new ways to comprehend doing the right things by linking developmental challenges to the relevant academic leadership theories in the HEI context.

In this regard, the author capitalized on the combination of full-range leadership behaviors (Conger & Riggo, 2007; McCauley et al., 2010) and full-scale instructional behaviors (Hallinger, 2003, 2008; Hallinger et al., 2013). This is because scholars recognized the two notions as complementing leadership behaviors for schooling (Hallinger, 2003; Marks & Printy, 2003; Stewart, 2006). The proponents of the full-range and full-scale leadership theories independently formulated the research tools. The tools are the multifactor leadership questionnaire (MLQ) (Bass & Avalio, 1995) and the principal instructional management rating scale (PIMRS) (Hallinger et al., 2013), respectively. Both MLQ and PIRMS research tools are widely known to either measure the effectiveness of leadership or to evolve members in leadership roles and processes within a single learning organization (Bass &Avoio, 1995; Hallinger, 2003). Later, Mekuria (2022) verified that the contextually modified MLQ and PIRMS items are complementary to measuring or developing academic leadership behaviors in university contexts. The proposed academic leadership behaviors model, in terms of importance, includes instructional, transformational, transactional, and laissez-faire leadership behaviors. Further, he named the combined concepts “complete academic leadership behaviors” in the public university context. Thus, the research tool items, which the author constructed from the combination of the mentioned four leadership behaviors, are used as dependent variables of the subordinates’ contests.

To the point, the examined predictor variables were solidified in this study into two categories. The categories include the sources of developmental challenges that help to stop unethical behaviors in academic governance and the developmental challenges that help to promote change-oriented academic governance. The developmental challenges that may stop immoral acts of academic governance include questioning against coercive power such as members' intimidating, alienation, and nepotism that lead to academic corruption; old trends, beliefs, and values of academic working culture; breaking the status quo; sectarianism; and conflicts. Besides, developmental challenges that contribute to promoting new change in academic governance may include members who have innovative, novel, up-to-date, and risk-taking competencies. Subordinate challenges usually support correcting superiors' academic governance deficiencies through the transformation from old trends, beliefs, and values to innovative, novel, up-to-date, or advanced academic governance in the public university landscape. Thus, the author formulated a conceptual framework to construct the research tool items for developmental sources of challenges that account for the development of transformational, transactional, instructional, and laissez-faire leadership behaviors in the HEI context.

Conceptual framework: The author employed the potential sources of developmental challenges that frequently vibrate in the literature (Carter et al., 2005; Giber et al., 2009; Kouze& Posner, 2017; McCauley et al., 2010; Yukl, 2016) and the complete academic leadership behaviors (Mekuria, 2022) to construct conceptual framework of the study.

Figure 1 Conceptual framework

In this conceptual framework, developmental challenges (1) are subordinate challenges that are more important than promoting unique, inventive ideas and self-updating efforts for the institution. Furthermore, developmental challenges (2) are subordinate challenges that help stop the immoral conduct of superiors in academic governance. These sources of challenges include value conflicts, questioning, and sometimes even risk-taking while attempting to reverting unethical behaviors to an ethical condition of things. Besides, complete academic leadership behaviors include instructional, transformational, transactional, and laissez-faire leadership behaviors (Mekuria, 2022). The assumption of constructing this framework is to investigate if the developmental sources of challenges contribute to predicting complete academic leadership behaviors in Ethiopia's public university setting. The data processing methods were guided by a hypothesis and its sub-hypotheses. The purpose of this study was to identify potential sources of developmental challenges that negatively impact the development of complete academic leadership behaviors in Ethiopian public universities.

Hypothesis (H) 1: Potential sources of developmental challenges in leadership development do not predict complete academic leadership behaviors in the university context.

H 1.1: Potential sources of developmental challenges in leadership development do not predict transformational leadership behavior in the university context.

H 1.2: Potential sources of developmental challenges in leadership development do not predict transactional leadership behavior in the university context.

H 1.3: Potential sources of developmental challenges in leadership development do not predict laissez-faire leadership behavior in the university context.

H 1.4: Potential sources of developmental challenges in leadership development do not predict instructional leadership behaviors in the university context.

2. METHODS

The author employed a cross-sectional survey research design to administer the quantitative data collection and analysis procedures. He further employed a random sampling technique to draw six public universities from the first, second, and third generations, of which two were selected from each of the generations. Using Coachan's (1977) sample size determination formula and the research context in the study area, the author computed the sample size to be 540 subjects. Consequently, he intended to select 540 subjects randomly from the target population of the study. In this study, a random sampling technique was employed to select 540 academic leaders from the strata of band-1, band-2, and band-6 academic field categories from the six sample public universities. Thus, the author intended to randomly select 540 subjects from six sample public universities.

2.1. Population of the Study

The author employed an equal strata random sampling technique to draw two public universities from each of the first, second, and third generations, of which the total selected was six of Ethiopia's public universities. During data collection, there were 34 of Ethiopia's public universities labelled as first, second and third generations, with an estimated 31269 active faculty members (MoE, 2018). The average population of each of the public universities was nearly 920, whereas the sample size determined (n = 385) using Cochran's (1977) was less than the average of one sample university in the study area. In this regard, it was possible to conduct the study at one of the sample universities. Nevertheless, to draw public universities by generation, the author randomly selected six public universities (two from each of the first, second, and third generations), in which the estimated target population was 5520 (6*920) academic staff, including academic officers (hereafter, academic leaders).

Consequently, using Coachan's (1977) sample size determination and correction techniques, along with the assumption that as sample size increases, the quality of the data increases, the sample size of the population was determined to be 540 academic leaders (faculty up to the president). Further, the author employed a random sampling technique to select 540 research participants. The randomly selected strata were band-1 (engineering and technology), band-2 (natural and computational sciences), and band-6 (social and behavioral sciences) academic field categories. In this wisdom, the author randomly selected 30 academic leaders from each one of the academic field categories, of

which the total selected academic leaders from one university were 90 and from the total sample of public universities were 540 subject units.

2.2. Measurement

The author formulated the self-developed questionnaire items regarding sources of challenges and complete academic leadership behaviors from the literature reviewed. He employed the core sources of developmental challenge in leadership development literature (Giber et al., 2009; Kouzes & Posner, 2013; McCauley et al., 2010; Yukl, 2010) to construct core challenging factor items. These are subordinates' novelty, staying up-to-date, encountering the status quo, looking innovative, questioning immediately for immoral acts, risk-taking, and contesting outdated looms, which were taken as independent variables. Besides, the study employed a combination of modified MLQ and PIMRS academic leadership behaviors as dependent variable items.

Accordingly, the author constructed the research tool items from the developmental challenging factors (7 items). Besides, he constructed the tool items from transformational (20 items), transactional (12 items), laissez-faire (4 items), and instructional leadership behaviors (20 items). The research tool includes 63 Likert-type, five-point rating scale items. Thus, the tool was appropriate to collect data through participants self-rating challenging experiences and through participants rating their immediate superiors' academic leadership behaviors through the chain from classroom managers up to the chief executive officers in a public university context. Consequently, the tool direction asked participants to rate their own experiences of challenging immediate supervisors either to stop unethical acts or to promote innovative or up-to-date concerns in their home university. Besides, each one of the participants, from classroom faculty up to the president, was asked to rate their immediate superior's academic leadership behaviors using the formulated tool items. In this wisdom, the author designed a multivariate regression analysis technique to investigate the potential sources of challenge that account for the development of complete academic leadership behaviors using STATA-Version 12 in Ethiopia's public university.

3. RESULTS

3.1. Participants Characteristics

The faculty members who engaged directly in community services, research, and teaching roles and the academic officers who engaged directly in formal managerial leadership positions from heads up to the presidents, along with the faculty members' roles, participated in this study. In addition, the academic streams and the academic ranks were taken as participant characteristics to inform the appropriateness of the data sources for the study. Regarding the participants' characteristics and academic stream, 36.5% of participants were in the social sciences (Band 6), and 63.5% of participants were a combination of two bands: engineering and technology (Band 1) and natural and computational sciences (Band 2).

Table 1:

Academic stream of participants

Participants	**Stream**		**Total**
	Natural Sciences &Technology (Band-1 & Band-2)	Social Sciences (Band-6)	
Academic officers	86	53	139(28.5%)
Faculty members	223	125	348 (71.5%)
Total	309(63.5%)	178(36.5%)	487 (100%)

As well, 28.5% of the participants were active academic officers from the lower managerial positions up to the chief executive officer team members, whereas 71.5% of the participants were faculty members, of which 20.6% had past experience in academic managerial positions. In this wisdom, the data collected from the mentioned randomly selected participants was appropriate to verify if the subordinates' reasonable challenges improve academic leadership behaviors.

As noticed in Table 2, the participants' distributions in academic ranks from assistant lecturer (8.4%), lecturer (72.2%), assistant professor (15.2%), associate professor (3.3), and professor (1%) reflected the challenging situation in their own sample universities. During data collection, the compatriot professors were not identified at five of the six sample universities. In this visible intellectual capital challenge, the participants may respond to the contributions of subordinates' rational challenges and adjust superiors' academic leadership behaviors in university settings. Thus,

the participants' characteristics can represent the entire academic staff and faculty of Ethiopia's public universities.

Table 2:

Academic rank of participants

Participants	**Academic Rank**					**Total**
	Assistant lecturer	Lecturer	Assi. prof.	Asso. prof.	Professor	
Academic officers	5	101	26	6	1	139
Faculty members	36	250	48	10	4	348
Total	41 (8.4%)	351(72.1%)	74 (15.2%)	16 (3.3 %)	5(1%)	487

In this wisdom of participant characteristics, 540 questionnaires were distributed, of which 487 (90.2%) were filled out and returned properly. Accordingly, the study tested the data to check if the collected data was statistically analyzable using the Cronbach alpha coefficient (α). The determined results show that the Cronbach Alpha coefficient ranges from α = 0.69 for laissez-faire (4 items) up to 0.97 for instructional (20 items) leadership behaviors. For the remaining leadership behaviors, α = 0.75 for transactional (12 items) and α = 0.93 for transformational (20 items) leadership behaviors. Besides, for the newly constructed developmental challenge (7 items), α = 0.86 and for the overall tool (63 items), α = 0.96 were in the range of the highest coefficients. In general, the overall coefficients of the Cronbach alpha test results were within the acceptable range of $\alpha \geq 0.7$, which could be interpreted as falling within the acceptable zone for statistical analysis. So, the data collected through the contextually and conceptually modified tool was statistically analyzable.

3.2. Potential Challenges and Academic Leadership Behaviors

For various constructive reasons, the author questioned academic leaders in leadership echelons about their experiences challenging their immediate leaders to determine whether or not the developmental challenges faced by subordinates contribute to the evolution of academic leadership behaviors.

Further, they rated the items to evaluate the academic leadership behaviors of their immediate superiors to determine whether there has been a shift in academic leadership behaviors due to logical challenges faced by subordinates in academic work environments. According to conventional

thinking, the study confirmed how developmental challenges influence academic leadership behaviors in public university settings.

As shown in Table 3, the potential sources of challenges that subordinates frequently experienced to adjust the superiors' academic leadership behaviors were being innovative (2.7) and questioning immoral acts (2.7) in academic-related work. Besides, the remaining sources of challenges, such as contesting outdated loom (2.6), risk-taking (2.5), challenging the status quo (2.5), staying up-to-date (2.4), and novelty (2.4), were experienced by subordinates to influence superiors' academic leadership styles in HEIs. On the other hand, subordinates rated their immediate academic leaders' leadership behaviors, beginning from instructors up to the chief executive officers. In this apprehension, the overall measure of academic leadership behaviors from operational (lower), through tactical (middle), and up to strategic (top) echelons yields the academic leadership behaviors of the HEIs.

Table 3:

Descriptive statistics

Sources of Challenges	**N**	**Min.**	**Max.**	**Mean**	**Std. Deviation**
Novelty	487	.0	4.0	2.407	1.1417
Stay up to date	487	.0	4.0	2.378	1.1060
Encounter status quo	485	.0	4.0	2.526	1.1308
Looks Innovative	486	.0	4.0	2.714	1.0719
Questioning for immoral acts	487	.0	4.0	2.659	.9932
Risk-taking	487	.0	4.0	2.524	1.0536
Contest outdated loom	483	.0	4.0	2.609	1.0923
Academic leadership behaviors					
Transformational behavior	487	.0	4.0	2.665	.8271
Transactional behavior	487	.0	4.0	2.238	.6764
Laissez-faire behavior	487	.0	4.0	1.819	.9814
Instructional behavior	487	.0	4.0	2.349	1.0068
Valid N (list wise)	480				

In this feature, the top-rated behavior was transformational leadership (2.7), followed by instructional leadership behavior (2.4). The remaining transactional (2.2) and laissez-faire (1.8) leadership behaviors were the rated scores in public HEIs. However, the potential sources of developmental challenges that account for the development of transformational, instructional,

transactional, and laissez-faire leadership behaviors were unclear in the HEI context. Thus, this study employed the multivariate regression analysis technique to investigate if challenging experiences account for the development of complete academic leadership behaviors in a public HEI context.

3.3. Linking Developmental Challenges and Academic leadership Behaviors

A multivariate regression analysis technique was employed to investigate the associations between developmental challenges and the components of complete academic leadership behaviors in a university context. In Table 4, the summary of R-squares shows the change because of the relationship between the potential sources of challenges and the complete academic leadership behaviors. In this aspect, the potential sources of challenge best accounted for the development of instructional leadership behavior (16.5%) followed by transformational leadership behavior (11.1%). In addition, the subordinates' challenge of immediate academic leaders was attributed to the change in transactional (8.9%) and laissez-faire (4.1%) leadership behaviors. In consequence, the study investigated the attribution of potential sources of developmental challenges to predicting each of the complete academic leadership behaviors in public HEIs. Besides, the distribution probability of the F-statistics for the regressions' relationship between the subordinates' effort to challenge superiors and its effect on the development of complete academic leadership behaviors because of the challenges is depicted in Table 4.

Table 4:

F-Test, Multivariate Regression Analysis

Equation	**Obs**	**Parms**	**RMSE**	**"R-sq"**	**F**	**P**
Transformational	479	8	.7899648	0.1108	8.385497	0.0000
Transactional	479	8	.6454316	0.0890	6.577437	0.0000
Laissez-faire	479	8	.9614927	0.0408	2.86464	0.0062
Instructional	479	8	.9273841	0.1654	13.33727	0.0000

Accordingly, the probability of F-statistics ($F = 8.39$, $P \leq 0.001$; $F = 6.58$, $P \leq 0.001$; $F = 2.87$, $P = 0.006$; $F = 13.34$, $P \leq 0.001$) for the multivariate regression relationships between the potential sources of developmental challenges and each one of the transformational, transactional, and laissez-faire leadership behaviors rejected the null hypothesis along with the sub-hypotheses. The rejected null hypothesis is that "potential sources of challenge in leadership development do not predict complete academic leadership behaviors in the university context." This is because there were strong

predictive relationships between the potential sources of challenges and the complete academic leadership behaviors as consequences of subordinates' efforts to challenge superiors in academic governance.

Further, the study presented statistically significant differences between the mean scores of each one of the items of challenges and each of the components of academic leadership behaviors using STATA 12. As shown in Table 5, transformational leadership behavior was most likely attributed to the consequences of subordinates' novelty (t = 3.4, P = 0.001), encounters with the status quo (t = 2.1, P = 0.04), and questioning for immoral acts (t = 2.3, P = 0.025) against immediate academic leaders.

Besides, the change in transactional leadership behavior occurred due to the influence of subordinates challenging superiors to stay up-to-date (t = 2.7, P = 0.007), encountering the status quo (2.3, P = 0.026), and looking innovative (t = -2.7, P = 0.008). In the same manner of statistical testing, the significant change in laissez-faire behavior occurred because of the innovative appearances of subordinates for superiors (t = -3.1, P = 0.002) at $\alpha = 0.05$ confidence interval. Moreover, the contributors to the change in instructional leadership behavior were the subordinate's influence on superiors in staying up-to-date (t = 4.1, $P \leq 0.001$) and risk-taking (t = 2.3, P = 0.021).

Table 5:

Multivariate Regression Test Results

	Coef.	**Std. Err.**	**T**	**P>|t|**	**[95% Conf. Interval]**	
Transformational					Lower	Upper
Novelty	.1445463	.0428712	**3.37**	0.001	.0603038	.2287887
Stay up to date	.0017323	.0468466	0.04	0.971	-.090322	.0937865
Encounter status quo	.091245	.0438612	**2.08**	0.038	.0050571	.1774329
Looks Innovative	-.0541568	.0470494	-1.15	0.250	-.1466095	.0382959
Questioning for immoral acts	.1167742	.0518488	**2.25**	0.025	.0148907	.2186577
Risk-taking	.0542338	.0493174	1.10	0.272	-.0426756	.1511431
Contest outdated loom	-.0519633	.0452392	-1.15	0.251	-.1408589	.0369323
_cons	1.916749	.1222146	15.68	0.000	1.676596	2.156903
Transactional						
Novelty	.0498406	.0350274	1.42	0.155	-.0189887	.1186699
Stay up to date	.1040467	.0382755	**2.72**	0.007	.0288348	.1792585
Encounter status quo	.0797761	.0358363	**2.23**	0.026	.0093572	.1501949
Looks Innovative	-.1030549	.0384412	**-2.68**	0.008	-.1785923	-.0275175
Questioning for immoral acts	.0598848	.0423624	1.41	0.158	-.0233579	.1431276
Risk-taking	.0015651	.0402942	0.04	0.969	-.0776136	.0807438
Contest outdated loom	-.0002192	.0369622	-0.01	0.995	-.0728503	.0724119
_cons	1.787556	.099854	17.90	0.000	1.591341	1.98377
Laissez-faire						

	Coef.	**Std. Err.**	**T**	**P>|t|**	**[95% Conf. Interval]**	
Novelty	.07844	.0521799	1.50	0.133	-.0240943	.1809743
Stay up to date	.0938528	.0570186	1.65	0.100	-.0181894	.2058951
Encounter status quo	.051612	.053385	0.97	0.334	-.0532902	.1565142
Looks Innovative	-.1777765	.0572654	**-3.10**	0.002	-.2903038	-.0652492
Questioning for immoral acts	-.0627459	.0631069	-0.99	0.321	-.1867518	.0612599
Risk-taking	-.0221975	.0600259	-0.37	0.712	-.1401492	.0957542
Contest outdated loom	.0702704	.0550621	1.28	0.203	-.0379274	.1784683
_cons	1.809021	.1487515	12.16	0.000	1.516722	2.10132
Instructional						
Novelty	-.0175184	.0503289	-0.35	0.728	-.1164153	.0813785
Stay up to date	.2227761	.0549959	**4.05**	0.000	.1147085	.3308437
Encounter status quo	.04559	.0514912	0.89	0.376	-.0555908	.1467709
Looks Innovative	.0081989	.0552339	0.15	0.882	-.1003365	.1167343
Questioning for immoral acts	.0997296	.0608682	1.64	0.102	-.0198772	.2193364
Risk-taking	.1336484	.0578965	**2.31**	0.021	.019881	.2474158
Contest outdated loom	-.0158666	.0531088	-0.30	0.765	-.1202262	.0884929
_cons	1.165784	.1434746	8.13	0.000	.8838542	1.447713

In this regard, to build the instructional aspect of task-related behavior, there is a need to train members from the faculty up to the team members of academic chief executive officers (CEOs) to evolve them into leadership roles. In addition, encouraging academic leaders to engage in risk-taking behavior was one of the attribution elements for the development of instructional leadership behavior in public HEIs.

In sum, challenging the status quo, being innovative, and staying up-to-date were the variables that contributed to advancing at least the two academic leadership behaviors. Nevertheless, contesting the outdated loom that was rated nearly above an average perceived mean score was least likely to explain any one of the academic leadership behaviors. Consequently, the challenging obstacles investigated may harmfully influence the development of academic leadership behaviors in the university context. Such a challenging obstacle should be resolved by preparing a developmental education policy that employs developmental challenges. The developmental challenges may help either to stop immoral acts of superiors or to employ up-to-date, innovative, and novel approaches in academic governance. In this focus, the author discussed the results concerning the previous studies and the existing phenomena.

4. DISCUSSIONS

In the discussion section, the author emphasizes substantial sources of developmental challenges that account for the development of academic leadership behaviors in the Ethiopian public university context. Although untrained academic officers usually interpret challenges as an 'impediment force'

to resist institutional success, this study lifts up the concepts of developmental challenges that advance academic leadership behaviors in line with the timely literature (Kouzes & Posner, 2013; McCauley et al., 2010; Nikezić et al., 2012; Yukl, 2016). In this regard, the author examined developmental challenges that account for the improvement of academic leadership behaviors in public universities. Moreover, subordinate developmental challenges are a two-sided sword, in which the first is used to push superiors to promote novel, innovative, or up-to-date academic governance, and the second is useful to stop unethical acts of superiors.

As shown above, the developmental challenges are useful to improve the preparation of academic leaders toward attaining institutional goals. Likewise, the best combinations of the potential sources of challenges that predict complete academic leadership behaviors are useful for the preparation of academic leadership programs in a public university context. The focused potential sources of challenge accounted for the maximum variations on instructional leadership behaviors (16.6%) and continued on transformational (11.1%), transactional (8.9%), and laissez-faire (4.1%) leadership behaviors. Thus, faculty members' rational challenges against academic officers' governance hitch are attributable to the development of academic leadership behaviors in public universities.

Being innovative is an innovation-driven problem-solving form that usually occurs because subordinates challenge their superiors to push them to recognize the ongoing state-of-the-art amenities. According to Kouzes and Posner (2013, 2017), creating a novel product, providing state-of-the-art services, passing ground-breaking legislation, organizing a youth environmental program, transforming a bureaucratic-military program into one that was revolutionary, or launching a new plant or business could have been the challenges. They also noticed that dealing with unforeseen economic downturns, betrayals from others; physical incapacity, natural calamities, civil upheaval, and technological disruptions could also be involved in describing innovation as a challenge in higher education (Maitra, 2007). In this concern, the independent variable, innovation, in the setting of HEIs predicted two dependent variables: transactional leadership behaviors ($t = -2.7$, $P = 0.008$) and laissez-faire ($t = -3.1$, $P = 0.002$).

It is clear that highly mature personnel benefit from a laissez-faire leadership style (Conger & Riggio, 2007; McCauley et al., 2010). Academic employees then have a higher level of maturity. In the Ethiopian environment, the maturity levels of subordinates usually exceed those of superiors.

This is a result of the more experienced faculty members choosing to work on academic projects and research rather than accepting jobs as academic officers. In this kind of environment, subordinates teach superiors instead of the other way around. Additionally, contingent rewards and management by exceptions (passive and active) sub-behaviors are transactional leadership behavior components, which are regarded as managerial leadership behavior. Due to overlapping perspectives, it can occasionally be difficult to distinguish between laissez-faire conduct and management by exception passivity (Bass & Avolio, 1995; Stewart, 2006). Challenges arise when the maturity levels of subordinates surpass those of superiors in this particular area. Still, in this study, for innovative subordinates to succeed in public HEIs, managerial leadership style and free-rain leadership behavior were necessary.

In challenging the status quo or traditional ways of academic working such as teaching, supervising students' projects, research, and community services, it accounted for the development of transformational ($t = 2.1$, $P = 0.038$, $df = 486$) and transactional (2.3, $P = 0.026$) leadership behaviors. In this regard, subordinates' breaking of the status quo contributes to improving the transformation dimension of leadership behavior and the transactional or managerial aspects of leadership behavior. In the literature, transformational behaviors of supervisors enhance students' success in project work, such as research outputs (Barbuto et al., 2009; Laguerre, 2010; Maitra, 2007). Thus, breaking the old ways of preparing academic leaders could contribute to the search for innovative ideas and stop unnecessary superior-control mechanisms while managing subordinates, particularly at the academic work execution level.

Staying up-to-date with subordinates rather than superiors on the expansion of new possibilities for academic leadership development procedures has also been identified as one of the sources of developmental challenges most closely related to academic leadership development outcomes. The self-perceived mean score for this source of obstacles did not differ statistically significantly between academic officers (who report to CEOs) and faculty members (who simply teach). Furthermore, Kouzes and Posner (2013, 2017) observed that "staying up to date" is utilized to challenge organizational leadership practices. This view of challenge as a developmental force is frequently noticed in the leadership development literature (Carter et al., 2005; Giber et al., 2009; McCauley et al., 2010). Thus, building a self-development culture in academic leadership roles could help to expand novelty within learning institutions.

Questioning immoral acts is a question frequently heard in academic meetings, seminars, and workshops of the academic community in Ethiopian public universities. Besides, questions against immoral acts are frequently observed when faculty members face executives who often break the academic work policy dimensions, procedures, rules, and statutes for personal interests. Further, questioning executives usually appear when they employ pseudo-type merit competition or when academic governance is politically injected into Ethiopia's public HEIs (Berhanu, 2014; Saint, 2004). For instance, the author observed two of the academic officers who have reflected on their own stories disappointedly, in which one of the participants was beaten and the other won the higher-level academic officer positions in the pseudo-type merit competitions. What we could learn from the pseudo-type of merit competition is the serious and challenging tactics to reverse unethical-to-ethical merit-based competition. In this regard, the logical challenge from the participants against the academic decision may help to rethink reducing the trends of the pseudo-type merit competition for the future.

Moreover, there were observed immoral issues such as unfair decisions on the academic career, disciplinary matters, program expansions, and research budget distributions, which frequently challenged the executive decisions that primarily benefited individuals rather than public institutions. Such aspects of challenge seem in line with the views of Kouzes and Posner (2013). In this study, however, there were also best experiences observed that were a lesson to the academic community. For instance, all of the presidents and vice presidents of the sample public universities were observed engaging in classroom teaching and supervising the students' projects.

In this sense, the senior academic officers, including the presidents, have teaching, research, and community service tasks, duties, and responsibilities. The mentioned academic leadership roles made the academic leadership complex because even the president is accountable to the program head while executing the teaching role, accountable to the research coordinator while perusing the research duties, and accountable to the structure heading the community service activities. As indicated, academic personnel who were under the control of the senior academic officers have also been led to execute their functions and professional roles. In this regard, the mentioned "what can we learn" question usually arises when indifferent acts of academic officers are situated within the learning institutions. As a consequence, the unacceptable manner of academic officers will be

changed because of the subordinate challenge. Further, the trend may be shared to expand such challenging experiences of academic leadership-altering processes in the public university context.

Lack of novelty, that is, a lack of knowledge, skills, and experiences of academic leaders, was observed as a serious challenge to impede the development of academic leadership behaviors, whereas in this study, a novelty that includes knowledge, skills, and experiences of academic leadership wasn't considered a serious potential source of challenges that account for academic leadership behaviors in the context of public universities in Ethiopia. In this category, the observed phenomena have support in the literature because the authors considered novelty to be a potential source of challenges in leadership development efforts (McCauley et al., 2010). This is because subordinate novelty is higher than superior novelty in academic qualifications. The consequences of a lack of novelty may affect the flow of novelty from superiors to subordinates. Thus, it is useful for superiors to learn from their subordinates, particularly in HEIs.

Contested outdated loom means the traditional ways of academic governance that have been surrounded by favoritism, loyalty, and politics are perceived to be higher compared to the majority of the challenging items, whereas this item could not make a statistically significant association with any one of the components of complete academic leadership behaviors in the study area. In this sense, the traditional ways of academic governance that were surrounded by favoritism, loyalty, and politics are less important in shaping complete academic leadership behaviors in Ethiopian public universities. Nevertheless, challenging the acts of traditional loom in leadership development accounts for reshaping leadership behaviors (Nikezić et al., 2012; Yukl, 2010).

In addition to the investigated and discussed challenging issues in the present study, there are also observed potential challenges that require in-depth qualitative investigation in the current context of public universities in Ethiopia. These are a lack of faculty commitment to serve the local communities, the incipient of hidden agendas, and role-mix conflicts among top academic officers. Besides, power flux at chief executive officer positions, setting unclear institutional goals, and the emergence of sectarian politics are also coming to serious challenges, influencing generally faculty members and particularly academic officers to discharge their academic leadership duties and responsibilities. In this regard, there are authors who appreciated the empire regime compared to the Dergue and partly the existing regimes (Asgedom, 2005; Berhanu, 2014), whereas Ashcroft (2004)

partly appreciated the then-massive expansion of Ethiopia's public HEIs compared to the UK's experiences. Nevertheless, her compression seems lacking a contextual lens to compare the challenging experiences of higher education expansion in the two countries, the UK and Ethiopia.

In general, the potential sources of challenges that account for the current academic leadership development activities are subordinates' novelty, innovative behaviors, and staying up-to-date with superiors' expectations. Besides, subordinates act against superiors in breaking the traditional status quo; questioning for immoral academic governor activities; and risk-taking to break bottleneck rules are useful challenges that help to re-correct unethical behaviors. In addition, subordinates' challenges against unclear institutional goals, bigoted agenda setting, and role mix conflicts are observed as potential sources of developmental challenges. To benefit from such sources of developmental challenges, Ethiopia's public universities have to establish a developmental education policy that provides legal rights to either stop unethical behavior by members or to promote innovative concerns for the benefit of the organization.

5. CONCLUSION

The The potential sources of challenges such as the novelty of subordinates, breaking the status quo, and questioning of immoral acts are the best predictors of transformational leadership behavior in Ethiopia's public universities. Besides, staying up-to-date, breaking the status quo, and appearing innovative are the developmental challenges attributing to the variation in transactional leadership behavior, whereas being innovative alone is the best predictor of laissez-faire leadership behavior. Moreover, being up-to-date and risk-taking to break unnecessary laws are developmental challenges that account for the variation in instructional leadership behavior in the public university. Furthermore, the overall seven potential sources of challenges are attributed to explaining substantial variations, with the highest for instructional leadership behavior and continuing for transformational, transactional, and laissez-faire leadership behaviors in Ethiopia's public university context.

This notion holds that subordinates challenging superiors in higher learning institutions is an effective way to extend beneficial academic leadership behaviors. Subordinate challenges to cease unethical conduct by superiors are effective in changing unlawful to moral managerial behaviors in university academic governance. Consequently, there is a chance for superiors to gain insight into the developmental issues faced by subordinates at higher educational institutions. In Ethiopian

public universities, subordinates typically possess the same or even greater academic leadership competencies than their superiors. In this concern of learning from challenges, superiors can learn from subordinates if the communication system is two-dimensional and collegial, particularly in higher learning institutions. This means that to learn from subordinates' challenges, the academic governance landscape actively identifies and values subordinates' new viewpoints, creative ideas, or shared experiences. According to this wisdom, education policy formulation entails assisting subordinates in legally challenging superiors to stop unlawful conduct or encouraging superiors to use novel, innovative, or cutting-edge technologies in academic governance.

In conclusion, it's critical to identify potential sources of challenges when examining the effects of academic leadership development to identify any immediate constraints and drawbacks that may require further consideration. Additionally, it's important to resolve any obstacles that influence academic leadership development competencies to reverse challenges to the development force in the public university system. Hence, reasonable subordinates' challenges to immediate academic leaders or officers are a means for the development of complete academic leadership behaviors in the public universities of developing countries such as Ethiopia.

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