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Executive Coherence in Iranian Pluralistic Agricultural Extension and Advisory System

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ABSTRACT

The performance of a pluralistic extension and advisory system is strongly influenced by the presence of multidisciplinary professional actors and their executive interactions for synergistic achievements in a balanced institutional framework. The specific purpose of this study was to explore the institutional boundary of Iranian pluralistic extension system and the extent to which the multiple providers interact with each other in implementation of related programs. A sequential mixed methods research was developed. Qualitative data were collected via semi-structured interviews, and were analyzed by theme analysis. Quantitative data were gathered using a researcher-made questionnaire and were analyzed by social network analysis. According to the qualitative findings, multiple service providers were classified into 21 distinctive institutional categories. Also, findings showed that the current executive network was not satisfactory in terms of institutional coherence, such that a few dominant providers were very influential in the center, while most of the others had little linkages and thus power at the margin of the extension network. Such a highly centralized network is unsustainable and vulnerable from different viewpoints and cannot fulfill the tasks expected from extension system in Iranian heterogeneous agriculture sector. In this regard, establishing a multi-sectoral institutional platform to focus on enhancing mutual coordination and combining collective actions is recommended as an important structural adjustment in the current extension system. To this end, facilitating roles of the public extension agency as the most influential actor of the existing extension network will be extremely significant.

Keywords: Agricultural innovation**,** Executive relationships, Professional relationships, Social networks.

INTRODUCTION

Agriculture is one of the most important sectors of Iranian economy, representing about 27% of GDP, 30% of employment, and 35% of non-oil exports (Asadihkoob and Ebrahimi, 2017). Despite an old wonderful history in ancient innovations, there is evidence showing that Iranian agricultural is not exploiting its full potential due to insufficient capacity in innovation. In this regard, the agricultural services system, especially extension, has been always questionable about their low effectiveness in improving agricultural innovation.

Innovation is considered the heart of value creation and a key strategy to improve productivity for rural development (OECD, 2013; Sandoval *et al.*, 2016). While innovation is defined as a co-evolving process of technological and socio-organizational changes (Leeuwis and van den Ban, 2004; Hall and Clark, 2010; Schut *et al.*, 2016), over recent years, "networked innovation" has become an important theme within the literature that emphasizes the interactive and collaborative nature of the innovation process (Lambrecht *et al.*, 2015). Among the more

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advanced systems approaches to agricultural innovation is the Agricultural Innovation Systems (AIS) approach (Klerkx *et al.,* 2012; Schut *et al.,* 2016). This system recognizes agricultural innovation as the outcome of an interactive and co-evolutionary process (Smits and Kuhlmann, 2004), where a wider network of actors are engaged, with the speed and direction of innovation processes dramatically affected by the institutional and policy environment (Hall *et al.,* 2006; Klerkx *et al.,* 2010; Lamprinopoulou *et al.,* 2014). Consequently, innovation is perceived as a process of combined technological and non-technological changes (OECD/Eurostat, 2005; Hounkonnou *et al.,* 2012; Klerkx *et al.,* 2012; Lapple *et al.,* 2016). These changes occur across different levels and are influenced by interactions between actors and institutions from inside and outside the agricultural system (Klerkx *et al.,* 2010; Schut *et al.,* 2014; Schut *et al.,* 2015).

While agricultural extension was traditionally seen as the connection between research and changes in the individual farmer's behavior, today, it is no longer viewed as an agency, but as a system that is integral and central to innovation systems. In new conceptual framework, extension focuses on facilitating interaction and learning rather than solely on training farmers, and has a vital role to play in helping to strengthen capacities to innovate (Davis and Heemskerk, 2012; Lapple *et al.,* 2016). Agricultural extension has a tremendous potential to improve agricultural productivity (Davis, 2008; Swanson and Rajalahti, 2010), particularly in light of the fact that most of new farming technologies will be "information intensive" (Hellin, 2012). However, available empirical evidence show mixed results in terms of the performance of extension systems. On one hand, rates of return on and economic and social contribution of agricultural extension programs in some countries are high (Davis *et al.,* 2012). On the other hand, extension systems in many developing countries have been constantly viewed as ineffective in responding to the demands of clients (Birner *et al.,* 2009; Ragasa *et al.,* 2016). According to some scholars (e.g. van den Ban and Hawkins, 1988), much of these differences in functional performance come from the type of institutional structure and operational platform of AIS and its subsystems like extension system. Actually, co-innovation is influenced by how the AIS is structurally composed in terms of the presence of actors, their interactions, and the institutions that influence their behavior (Turner *et al.,* 2016). In other words, adoption of agricultural innovations is a complex process that can be affected by many variables such as extensional patterns (Zarafshani *et al.,* 2017) and institutional structures.

For many years, provision of agricultural extension services has been seen as a principle responsibility of the state worldwide (Kidd *et al.,* 2000). However, the last decade has seen a general shift in thinking about extension from a linear, technology transfer, "adoption of innovations" approach to recognition of the multiple roles of a wide range of actors within "innovation systems". In this regard, extension is no longer a unified public sector service, but rather, it is a multi-institutional network (Okorley *et al.,* 2010). Hence, new extension regime recognizes the need for multi-agency collaboration to combine strengths (Singh *et al.,* 2013) in a pluralistic systemic approach.

Pluralistic extension acknowledges the inherent differences that exist between farmers and farming systems and the need to address challenges with different approaches (Gemo *et al.,* 2013). According to Klerkx and Proctor (2013), a benefit of greater advisor diversity is increased client orientation (Prager *et al.,* 2017). The central idea is that farmers should be given opportunities for obtaining services from those most able and willing to do so (Kidd *et al.,* 2000). In addition, a pluralistic system is identified as preferable because it can address both government and land managers' needs and help reduce costs of services (Chowa *et al.,* 2013; Prager *et al.,* 2017). Several authors in extension (World Bank, 2000;; Pretty, 2003; Rivera and Qamar, 2003; Garforth, 2004; Rivera and Alex, 2004; Swanson and Samy, 2004) claim that ongoing working relationships and collaboration with

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stakeholders are essential for successful extension operation. However, coordination of such providers is challenging (GFRAS, 2012). Qamar (2000) made the point that the key challenge in adopting a pluralistic extension system is the coordination of the various related organizations. Also, weak collaboration with farmers' organizations, NGOs, and private sector in service delivery is a major problem of decentralized extension systems in developing countries (Okorley et al., 2010). Undoubtedly, via facilitating and reinforcing coordination, negotiation, and collaboration among multiple actors, an effective pluralistic extension network can foster more integrated and context-specific innovations.

Agricultural extension is one of the main policy instruments for innovation and sustainable rural development in Iran and its leading has been an important responsibility of the government attached to the Ministry of Agriculture since the beginning in 1950s. However, despite valuable achievements in technological aspects and disseminating, many relevant farming innovations, the structure, and managerial mechanisms of the existing multiple agricultural extension system are underdeveloped and have numerous critical problems.

Actually, after more than a half century, agricultural extension providers have still not been able to support all potential clientele in Iran (Van Den Ban and Samanta, 2006). Worse, because of their irrelevant services in some cases, extension programs have led to negative impacts such as environmental degradation and social inequality (Rezvanfar and Alimirzaei, 2014). Indeed, public agricultural extension as a professional practice in Iran is facing a serious crisis and needs to change (Hosseini and Rezaei, 2013). On the other hand, the complex problems and evolving needs of heterogeneous categories of Iranian farmers cannot be individually addressed by any segregated actor from the non-public sector. In other words, neither public agencies nor private firms can separately fulfill all extension responsibilities. Although current extension activities are carried out by a wide range of governmental departments, couple with independent individuals from private and non-profit sectors (Alimirzaei *et al.*, 2017), there is not any institutional platform to take care of the coordination and collaboration of different actors in such a pluralistic network. Consequently, improving executive participation and operational engagement of multiple extension providers is a critical managerial challenge. In recent years, the government is trying to establish a comprehensive strategy in order to enhance demand-driven services. A pilot project, namely, "Modern Agricultural Extension System" has been initiated since 2015, which aims to improve the current multiple structure of the extension system. One of the main aspects of the project is to develop systemic coordination and synergistic collaboration of different service providers in an integrated implementing approach. However, setting up an institutional platform along with an effective executive mechanism in order to synchronize and stimulate professional collaboration among different providers is still a critical challenge in the new extension strategy. Although there have been some fragmented efforts to assessing relationships between public agricultural research and extension, there has been little, if any, attention paid to investigate the interactions among multiple extension providers. In line with the above, current study aimed to explain the existing level of executive relationships amongst multiple providers in implementing extension programs. Undoubtedly, understanding the nature and the level of professional relationships among different actors can be increasingly important to improve agricultural extension programs and their intended outcomes in an effective and synergistic manner.

MATERIALS AND METHODS

In this study, a sequential mixed-method research was developed preliminary to identify the multiple agricultural extension providers and, consequently, to reveal the existing level

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of professional relationships amongst them in implementing extension programs. In the pre-entry stage of the qualitative phase, an interview protocol was developed according to literature review. This guide was used to explore the institutional entities that were providing extension-related services in the country. Using snowball sampling, 28 key informants including prominent academic experts, senior executive administrators, and representatives of private advisors were purposively selected based on their executive positions, career records, and also teaching and research backgrounds. Then, semi-structured interviews were conducted to define institutional boundaries of the existent multi-provider extension system. Interviewees were asked to determine the multiple extension actors according to professional missions and their current expected functions. Qualitative data were analyzed using theme analysis under the main assumptions of soft system methodology for identification and classification of real actors providing at least one kind of extension-related services. In this part, according to informants' viewpoints and considering various factors like the domain of activities, expected missions, institutional philosophy, executive structure, funding, and so on, extension actors were classified into distinctive categories with minimum institutional overlap. The data were coded, compared, and categorized using classic manual note taking.

In the quantitative phase, a descriptive survey was carried out using a researcher-made questionnaire. The face and content validity of the instrument were assessed and confirmed by five academic experts in Faculty of Agricultural Economic and Development, University of Tehran. Afterwards, prominent representatives of each identified category of the extension providers, which had been classified in the previous phase, were approached and interviewed purposively. All the extension categories were investigated in their highest domestic level. In each institutional category, two representatives were purposefully investigated. In other words, different extension actors were not studied individually. However, according to the related organizational chart in three categories of the extension actors, three informants were studied, expediently such that the sum of all investigated people in the quantitative phase was 45. Although all of the representatives served in the eadquarter related institution, they were completely informed about their subsets' conditions in all over the country. These key informants were asked to rate the level of executive interactions amongst their own subset entities and each of the other extension providers in the identified network, separately. The responses were given in accordance with the overall condition of the country. For this aim, all identified extension categories were horizontally and vertically entered into a data matrix in the questionnaire, and representatives were requested to express their own viewpoints on a continuum from 0 to 10 in each pairwise comparison cell. In other words, we asked only one fundamental question: "How do you rate the level of executive relationships among your subordinate institution and each extension actors listed in the matrix below?" Nonetheless, each of the representatives must have responded this question in 20 cells of the matrix separately. This step was performed coupled with face-to-face interviews.

Using UCINET 6 software, descriptive data were analyzed through social network analysis (SNA) as a tool for mapping the structural nature of relationships in the current executive network. This technique combines the concept of sociogram with elements of graph theory to analyze patterns of interaction among people in various kinds of networks (Scott *et al.*, 2005). Indeed, SNA surveys each member of a defined network about their links with all other members in that network (Hawe *et al.*, 2004; Fuller *et al.*, 2009). A visual representation of network relationships was also generated through the mentioned software. Although there are several ways to determine *Centrality* in a social network, two important indexes, namely, *Degree* and *Betweenness* were quantified in this study to illustrate the

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individual centrality of each extension actor in the network of executive relationships.

Degree of centrality refers to a particular person and the number of direct ties or links they have to the other people in the network (Hawe and Ghali, 2008). Actually, it is the count of an actor's ingoing and outgoing links (Hauck *et al.*, 2016). Two sets of measures are generated in this regard. Measures which each member reports about their links with others (that member's Out-Degree), and those which all others report about their links with that member (that member's In-Degree) (Hawe *et al.*, 2004; Fuller *et al.*, 2009). Furthermore, Betweenness centrality is the measure of how often an actor is found on the shortest path between two other actors that are otherwise disconnected (Calvet-Mir *et al.*, 2015; Hauck *et al.*, 2016). Indeed, Betweenness centrality is used as a measure of "gatekeeping" (Hawe and Ghali, 2008) in a typical social network.

During descriptive analyses, acquired interval data were recoded in which zero implied the absence of linkage and the numbers more than zero showed the presence of a linkage between each pair of compared extension categories. Actually, choosing a number from 1 to 10 was related to the "intensity of extension actors' relationships" that its results were applied in other intended analyses of the research.

RESULTS

Institutional Boundary of Iranian Extension and Advisory System

In order to draw the existing extension collaboration network, in the first step and based on the results of the qualitative analyses, the different individuals and institutions who were involved in providing various extension-related services were identified. Then, these actors were compared and classified into 21 distinctive institutional categories with least internal differences and also minimum external overlaps as Table 1.

All of these classified categories participated in delivering at least one agricultural

Table 1. Identified extension actors and their assigned abbreviations in the study.

Full name of extension actors	abbreviation
Public extension agencies affiliated with the Ministry of Agriculture	PBLC
Agricultural Guild System	GULD
Farmers' Organizations	FOs
Ministry of Cooperatives, Labor, and Social Welfare	COPR
Department of Environment	ENVR
Progressive farmers and rural facilitators	PROG
Commercial farmers and agro-industries	CMRL
Non-Governmental Organizations	NGOs
Agricultural Engineers Basij Organization	MOBL
agriculture-related scientific associations affiliated with the Ministry of Science, Research and Technology	ASOC
Ministry of Health and Medical Education	HELT
international donors such as FAO, World Bank, UNDP, etc.	IDON
domestic donors such as religious boards, Red Crescent Society, etc.	DDON
Agricultural Bank and other related credit institutions	BANK
Private extension firms and independent advisors	PRVT
agricultural universities and other higher education institutions	UNTY
Science and Technology Parks	PARK
Packing and processing enterprises	PACK
agricultural input and equipment suppliers	INPT
Municipalities	MNCP
Forests, Range and Watershed Management Organization	RSRC

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extension-related service to Iranian farmers at a large or small scale; as some of them took part in providing numerous kinds of extension and advisory services. However, according to the interviewees, some of these categories had no active status in the current extension system and served agriculture and rural communities in an isolated manner far from the necessary coordination with the other extension actors.

Executive Relationships Network

As shown in Table 2, according to the results of SNA, total density of the executive extension network was 0.386. The low numerical value of this index shows the executive relationships amongst identified extension categories are scant and the total cohesion of the network is weak. Still worse, according to the complementary qualitative findings, great deal of these linkages in the network are not institutionalized and, most of the time, occur in a symbolic or mandatory manner far from the desirable effects. For example, one of the interviewees noted:

"…In many cases, despite legal executive regulations and common interests, collaboration and professional relationships among different {extension} actors, even those who are delivering the same or complementary services, are very limited and problematic in villages… . Indeed, due to different reasons such as limited capacities, inadequate resources, poor incentives, and destructive competitions, there are no coherence and effective interactions among service providers or hardly occur in practice. As a result, most of them are delivering extension {and advisory} services in an isolated and fragmented manner, which can lead to many operational difficulties… ".

In addition, the total amount of transitivity and reciprocity coefficients were calculated as 0.529 and 0.588, respectively, as other main criteria for assessing the entire situation of the network. Although there was not any fully isolated extension provider in the executive network, some actors were more central than the others such that the total centrality of the network was 0.403. Other total indexes of the current executive extension network are shown in Table 2. Also, the schematic structure of the existent centralized network is illustrated in Figure 1.

As data in Table 3 indicate, PBLC has both the highest Betweenness and Degree centralities in the executive network. Such a high centrality implies that not only is PBLC connected to many other extension actors but also stands "in between" on the path linking many other providers to each other. In addition, as Figure 1 illustrates, the most lines in the network coming in and going out from the node represents PBLC. In other words, on one hand, PBLC is more consulted and participated by the rest of the providers in implementing extension programs and, on the other hand, along with PRVT are two active components of the extension system that absorb most executive relationships of the others in the network. Furthermore, PRVT was ranked at the second place in terms of individual centrality index in the network such that, after PBLC, both Betweenness and Degree centralities of PRVT were obviously higher than the others. In addition, PROG was rated as the third most central extension actor in the executive network. However, as mentioned above, most of the rest of the categories of extension providers had little linkages with their counterparts and could be regarded as peripheral nodes at the margin of the executive extension network.

Table 2. Total indexes of the current executive extension network.

Number of actors	Total possible links	Total observed links	In-degree centrality	Out-degree centrality	Total centrality	Density	Reciprocity	Transitivity
21	421	162	0.435	0.383	0.403	0.386	0.588	0.529

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Table 3. Actors' individual centrality in the current executive extension network.

Extension actor	Out-degree Centrality	In-degree centrality	Betweenness centrality
PBLC	15.00	16.00	70.15
GULD	7.00	6.00	3.84
FOs	11.00	12.00	22.03
COPR	4.00	5.00	6.58
ENVR	9.00	9.00	14.27
PROG	10.00	14.00	27.76
CMRL	6.00	7.00	2.88
NGOs	6.00	6.00	3.66
MOBL	8.00	7.00	4.04
ASOC	3.00	2.00	0.50
HELT	3.00	2.00	0.00
IDON	7.00	5.00	2.14
DDON	10.00	11.00	21.49
BANK	3.00	3.00	1.19
PRVT	10.00	16.00	36.84
UNTY	6.00	8.00	9.06
PARK	8.00	7.00	8.79
PACK	6.00	5.00	5.92
INPT	10.00	7.00	11.54
MNCP	6.00	3.00	3.09
RSRC	14.00	9.00	23.24

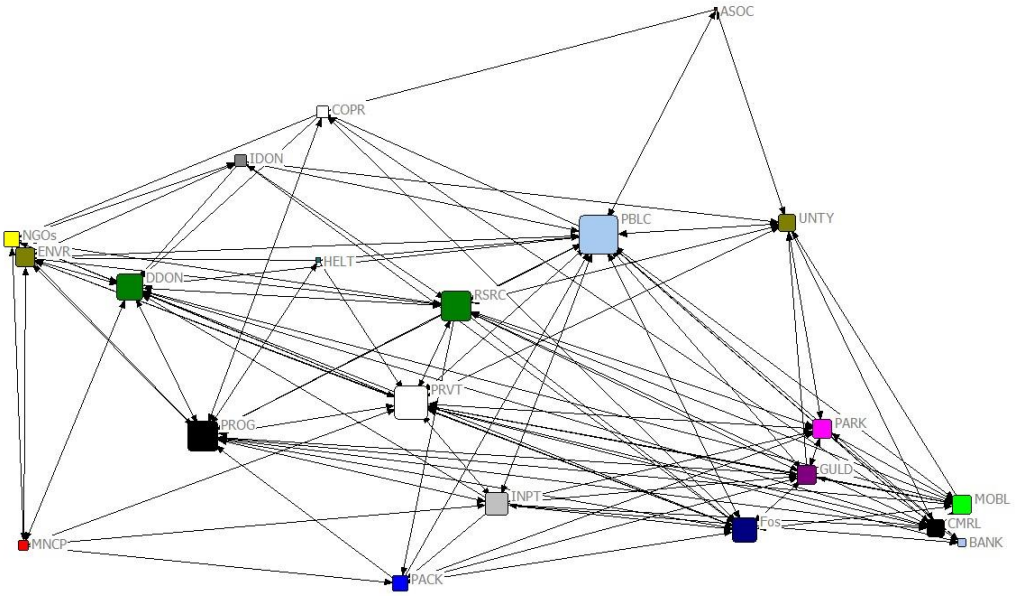

Figure 1. Executive network of multiple extension providers in terms of Degree centrality

Public extension agencies affiliated with the Ministry of Agriculture (PBLC); Agricultural Guild System (GULD); Farmers' Organizations (FOs); Ministry of Cooperatives, Labor and Social Welfare (COPR); Department of Environment (ENVR); Progressive farmers and rural facilitators (PROG); Commercial farmers and agro-industries (CMRL); Non-Governmental Organizations (NGOs); Agricultural Engineers Basij Organization (MOBL); Agriculture-related scientific associations affiliated with the Ministry of Science, Research and Technology (ASOC); Ministry of Health and Medical Education (HELT); International donors such as FAO, World Bank, UNDP, etc. (IDON); Domestic donors such as religious boards, Red Crescent Society, etc. (DDON); Agricultural Bank and other related credit institutions (BANK); Private extension firms and independent advisors (PRVT); Agricultural universities and other higher education institutions (UNTY); Science and Technology Parks (PARK); Packing and processing enterprises (PACK); Agricultural input and equipment suppliers (INPT); Municipalities (MNCP); Forests, Range and Watershed Management Organization (RSRC).

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DISCUSSION

The results of our study indicate that the current extension network has a weak cohesion totally**.** The calculated density (0.386) implies the level of professional interactions among actors in implementing extension programs is low and inappropriate. In fact, in comparison to the total 421 possible links in the network, only 162 executive linkages (about 39%) are observed in practice. In other words, almost two third of the possible linkages do not take form in the network. Medium amount of the transitivity coefficient indicates that half of the actors receive executive assistances from each other mutually. However, only about 59% of the existing linkages are two-way or reciprocal, which seems insufficient. On the other hand, the total centrality coefficient (0.403) indicates this low density network is also largely concentrated. Actually, extension network is highly centralized around a few dominant providers that have much more linkages with the others. At the same time, most of the rest have little executive interactions within the existent core-periphery network. The peripheral nodes have little power, if any, and cannot meaningfully influence strategies of implementing extension programs and relevant executive procedures. As a result, this group of actors often serves their clientele far from the other service providers in an isolated manner.

As some scholars (e. g. Ernstson *et al.*, 2009; Bodin and Crona, 2009; Okorley *et al*., 2010) have emphasized, there are several concerns with such a highly centralized network. Primarily, the uneven distribution of ties in itself leads to unbalanced and asymmetric relationships of influence and power in the network. Such significant differences in individual centralities are clearly observed in the obtained sociogram (Figure 1). Indeed, in a balanced pluralistic network, all actors have almost equal linkages quantitatively. It means that in the related sociogram, the investigated nodes do not have significant differences in size, and have approximately the same sizes. In such a balanced pluralistic network, executive procedures of extension programs are analyzed and audited by various expertise stakeholders; as also are adjusted according to their professional viewpoints. Therefore, the probability of achieving desirable outcomes will increase. However, our findings do not illustrate such an equality in the size of the nodes. In concentrated networks like ours, one or a few prominent actors as influential nodes and authoritative gatekeepers dictate, or at least, filter the extension programs and related executive procedures based on their own goals, way of thinking, and assessable resources. For example, under the influence of government policy and priorities, PBLC, as the most central node in the studied network, determines to a large extent what type of agricultural technologies, and knowhow, should be gained and disseminated in the farming societies. This unique influential node has a powerful status and can play critical roles in improving or even restricting performance and sustainability of the whole extension system. In this regard, during the qualitative interviews, almost all of the surveyed interviewees underlined that implementing methods of most of the extension programs directly or indirectly were influenced by PBLC. In such a situation, executive interests, strategic priorities, and administrative characteristics of the other extension providers, especially periphery actors, will be ignored. As a result, the fundamental conception of pluralism and its expected outcomes would be eliminated practically. Furthermore, such a centralized network allows little operational flexibility and does not have enough creativity to launch new executive extension strategies. Actually, in this condition, required institutional context and its executive implications will not take form to encourage creativity and to foster networking innovations in the realm of extension operational strategies. Therefore, the ways of implementing extension

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programs will be mostly stereotype, blueprint, and repeated in practice. This failure is of a great importance relating to sophisticated and multi-dimensional problems of Iranian heterogeneous farming ecosystems.

As many scholars (e. g. Giller *et al*., 2008; Klerkx and Leeuwis, 2009; Neef and Neubert, 2011; Struik *et al*., 2014; Schut *et al*., 2016) have emphasized, to address the complex problems in agricultural systems, interaction, negotiation, and collaboration between all stakeholders are very crucial. Indeed, under a systemic approach and through integrated co-management executive strategies within a coherent pluralistic platform, multiple extension providers have a greater chance of fulfilling their interrelated commitments. However, the current centralized network does not seem appropriate and efficient for integrating extension operational methodologies and their executive procedures. On the contrary, it can prevent executive methods and procedures to be situation-specific and context-oriented.

This critical structural inefficacy in the current extension system could lead to many problems such as duplication, technical confliction, executive inconsistency, waste of valuable resources, and, consequently, loss of farmers' confidence about the extension services in general. Still worse, the highly centralized extension network can be very vulnerable functionally, i.e. probable government and, as a result, PBLC withdrawal from providing extension services can lead to serious damages on the current extension methodologies and their relevant executive procedures.

Accordingly, there is an explicit need to concentrate more on establishing and developing a multi-sectoral networking platform in Iranian agricultural extension and advisory system. Such a platform will be particularly well-suited to handle the critical tasks of building new executive relationships, developing coordination, sharing resources, and combining collective actions among multiple providers, and monitoring their services in order to enhance co-innovation. However, establishing and maintaining successful mechanisms require fundamental structural changes and new institutional arrangements. Here, the role of PBLC can be crucial to facilitate desirable changes. This dominant actor should attempt to connect the other concerned players to meet the common missions and objectives, synergistically. PBLC has also a considerable role in encouraging and persuading other actors to develop their executive interactions in the pluralistic network. For example, independent advisors (PRVT), standing at the second individual centrality spot, were highly influenced by PBLC's recent policies such that, during the last decade, many responsibilities of PBLC were programmatically relegated to PRVT. Consequently, farmers, some other governmental entities, and even other private institutions have been frequently referring to PRVT and have turned it as an active provider in the extension network. Additionally, by facilitating enactment of the required regulations, PBLC could be an influential actor in strengthening the mutual trust and reciprocity ties among multiple actors, especially where they have complementary objectives, or at least, possess some equifinality. In this regard, identifying functional capacities of each of the extension providers by conducting a comprehensive institutional mapping, also understanding the mutual benefits among them are very important for addressing existing executive challenges.

To sum up, although the multiple extension providers do not operate as an integrated system in Iran and the level of their executive collaborations is not satisfactory, the presence of 21 institutional categories of extension actors enjoying plentiful resources and facilities is solely a valuable capacity to improve agricultural extension services all over the country. Undoubtedly, the transition from a top-down centralized extension network to a real more balanced pluralistic system is inherently sophisticated in practice. However, given

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new national policies, there is room for valuable structural and functional achievements in Iranian agricultural extension and advisory system.

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انسجامِ اجرایی در نظام چندبخشیِ ترویج و خدمات مشاوره‌ای کشاورزی ایران

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چکیده

عملکرد یک نظام ترویج و خدمات مشاوره‌ایِ چندبخشی، تا حد زیادی از وجود کنشگران حرفه‌ای چندرشته‌ای و تعاملات اجرایی آن‌ها در راستای کسب دستاوردهای هم‌افزایانه در یک شبکه نهادیِ متعادل تأثیر می‌پذیرد. هدف مطالعه حاضر، شناسایی مرز نهادیِ نظام چندبخشیِ ترویج کشاورزی ایران و تبیین سطح تعاملات کنشگران چندگانه آن در حوزه اجرای برنامه‌های ترویجی بود. در این راستا، یک طرح تحقیق آمیخته به شیوه دنباله‌ای تدوین شد. داده‌های فاز کیفی از طریق مصاحبه‌های نیمه-ساختارمند گردآوری و با روش تحلیل محتوای کیفی تحلیل شد. داده‌های فاز کمی نیز با استفاده از یک نسخه پرسشنامه محقق‌ساخته جمع‌آوری و با تکنیک تحلیل شبکه‌های اجتماعی مورد بررسی قرار گرفت. بر اساس یافته‌های کیفی، تدارک بینندگان چندگانه خدمات ترویجی و مشاوره‌ای کشاورزی در ۲۱ طبقه نهادیِ مجزا دسته‌بندی شدند. یافته‌های کمی نیز حکایت از آن داشت که شبکه اجرایی ترویج، از منظر انسجام و سطح تعاملات نهادی در وضعیت مطلوبی به سر نمی‌برد. چنان که تنها تعداد اندکی از تدارک بینندگان خدمات با برخورداری از نفوذ و قدرت اثرگذاری بسیار بالا در مرکز شبکه روابط اجرایی جای گرفته‌اند. حال آن که اکثر کنشگران، از روابط و در نتیجه قدرت اثرگذاری اندکی برخوردارند و در حاشیه شبکه ترویج قرار دارند. چنین شبکه‌ای، تا حد بسیار زیادی ناپایدار و از دیدگاه‌های مختلف آسیب‌پذیر است و به نظر نمی‌رسد که بتواند کارکردهای مورد انتظار از نظام ترویج را در شرایط ناهمگونِ بخش کشاورزی ایران برآورده سازد. لذا پایه‌ریزی یک عرصه نهادی فرابخشی به منظور تمرکز بر تقویت همکاری‌های متقابل و یکپارچه‌سازی اقدامات جمعی کنشگران نهادی، به عنوان یک اصلاح ساختاری مهم در نظام فعلی ترویج کشاورزی پیشنهاد می‌گردد که در راستای دستیابی به این مهم، نقش تسهیلگرانه کارگزاری ترویج دولتی به عنوان با نفوذترین کنشگر شبکه موجود، بسیار حایز اهمیت خواهد بود.

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