

Entrepreneurship in farming: What is the current status of knowledge in the Kurdistan Region of Iraq?

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ABSTRACT

The main objective of the paper was to conduct an exploratory research, using the literature review methodology, to ascertain the current status of knowledge on entrepreneurship in farming (agripreneurship) in the Kurdistan Region of Iraq (KRI). The literature review found many definitions of agripreneurship and who is a farmer entrepreneur (agripreneur) and also provided field evidence of agripreneurship and agripreneurs, but all from other countries. The exploratory research also found that other factors, for example the lack of entrepreneurship research by economic sector of activity, the oil-based economy, the traditionalism and high heterogeneity of the agricultural sector, conflict and post conflict zones as well as the particular nature of local conditions found in Iraq and the KRI all contribute to dampening entrepreneurship and research on entrepreneurship in agriculture. Consequently it was found that the current status of knowledge on agripreneurship in the KRI may be low, but may not be inexistent. However, the findings could support and guide needed future field research in the KRI on agripreneurship and related agripreneurs and the numerous definitions of agripreneurship and agripreneurs found from other countries could be very useful to develop a construct for developing a definition of agripreneurship and definitions of agripreneurs in the KRI.

Keywords: Entrepreneurship; Agriculture; Agripreneurship; Agripreneurs; farmers; farming; Iraq; Kurdistan

Introduction:

The current situation in the Kurdistan Region of Iraq (KRI), as reported by the Kurdistan Regional Government (KRG) and the World Bank (WB) in their 2016 report, provides for a wide range of immediate and medium to longer-term challenges that are intrinsically linked to the overall macroeconomic situation of Iraq as well as to the specific regional environment: fiscal crisis, internally displaced people, over dependency on the oil sector, an excessive role of the public sector in the economy, a dependency on imports and a weak fiscal system, KRG and WB, (2016).

Within this context, an economic diversification strategy was proposed by the KRG Vision 2020, and within this agriculture represents an opportunity as the sector's development is associated with divergent needs for investment and labor. In particular, a focus in Vision 2020 for agriculture is on farmers in terms of preparation and training and in providing a thriving agro-industry, Ministry of Planning KRG, (2013). In line with these priorities for farmers and agro-industry development, the article has as its main objective to provide for an exploratory research, based on the literature review research method, to attempt to ascertain the current status of knowledge on entrepreneurship in agriculture, termed agripreneurship, at the farmer level. This exploratory research has also a wider regional significance, for example for Iran, Turkey and Syria, as the KRI is at a geographical cross-road of much of the wider regional agricultural trade. Further for the development of a thriving agro-industry, as is indicated in the KRI's Vision 2020, there is a need for commercial farming that is based on entrepreneurship, agripreneurship, and farmers being entrepreneurs, agripreneurs¹. This not only can contribute to the development of the KRI's agricultural and food sector, but may also have

¹ Entrepreneurship at the farmer level is however only one of the many aspects that needs to be considered in the industrialization of an agricultural and food sector that contributes toward a thriving agro-industry.

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positive 'spill-over' effects on the development of the agri-food sectors in the wider region. Moreover, the research focus on entrepreneurship in farming, agripreneurship, also contributes to reducing the exclusion of entrepreneurship research in the agricultural sector, Alsos *et al.*, (2012), and supports what Fitz-Koch *et al.* (2017) call for in developing a 'new' paradigm for entrepreneurship in farming to be considered in a class of its own and not just as an 'add-in' to the entrepreneurship paradigm.

Background to the entrepreneurship paradigm and the Kurdistan Region of Iraq context

The word entrepreneurship finds its origins in the French language words 'entre' (between) and 'prendre' (to take), Barringer & Duane (2016) to mean a 'go between' or a 'between-taker' Coulter (2003). The term was first used by Richard Cantillon, an economist of the seventeenth century, to define a person who took risks in pursuing opportunities, Casson *et al.*, (2008), and who acted as a bridge between someone with capital, money, and he or she or as a group of people would take on the business opportunities. This later evolved in the eighteenth century to include somebody who was bearing risk about planning, supervising, organizing and owning factors of production, while during the nineteenth century the economist Say would go further by proposing that the profit arising from ownership of capital and that of entrepreneurial gains were distinct and separate, Coulter (2003). Thus already at the inception of the word entrepreneurship there is a strong cultural, social, ethnic and economic system background, defined to one country of origin and one social and economic development process, that then evolved into further and larger areas of the European continent and North America. Consequently, there are clear connotations and variations to the meaning of entrepreneurship that are spatially, culturally, socially, and economically bound.

The other connotations to the meaning of entrepreneurship seem to vary by primary, secondary and tertiary sectors as well as by private and public economies. Thus it may be presupposed that the meaning and significance of entrepreneurship will vary according to its application not only in culturally and socially diverse backgrounds, but also by economic sector of activity, the transport service and agricultural sectors, for example, as well as by the private and public economic sector of activity. Further and importantly here and as provided by Fitz-Koch *et al.* (2018), sector or industry specific research in entrepreneurship is rarely embraced and this is a notable limitation: it remains largely undertheorized and little understood. Moreover, and still according to Fitz-Koch *et al.*, (2018) and Alsos *et al.*, (2012) mainstream entrepreneurship research has largely overlooked the agricultural sector.

According to Hisrich *et al.*, (2010) entrepreneurship has a role in economic development that considers more than just increasing per capita output and income as it involves change in the structure of society and business, via innovation, while Casson *et al.*, (2008) concur that entrepreneurs make a vital contribution to economic growth and Metcalfe (2008) states it is the motive force of internal economic change. There is some support for the idea that entrepreneurial competencies are incubated in adversity, Casson *et al.*, (2008), but this is not fully supported by Banjaree and Buflo (2011) who see entrepreneurship in poorer contexts of the globe as being reluctant and the only way of finding employment and income. This also seems to coincide with what Ahmed *et al.*, (2011) consider in terms of an employment strategy that can lead to economic self-sufficiency of rural people.

Indeed, in the case of Iraq and in particular the KRI, the presence of a previous socialistic type economy as well as its current reliance on a large public sector economy requires entrepreneurship to be viewed in a context of a transition economy. In this context and as provided by Estrin *et al.*, (2008) the economic transition process can be divided into several stages and each stage will give rise to differing kinds of entrepreneurship, for example in the first stage of transition, where there are high levels of uncertainty, there will be one type of entrepreneurship, that will have little if any market and price information, disrupted supply of resources and the need for strong relations with networks, while subsequent stages of transition, as a result of macroeconomic stabilization policies, will have more market information, less need for networks and better and improved price information, all leading to different types of entrepreneurship for the other transition stages. Usually there are

typologies of entrepreneurs in transition economies related to individuals escaping poverty, farmers, professionals, former cadres and returning expatriates, Estrin *et al.*, (2008). Further in such transition contexts entrepreneurship tends to grow and it seems ultimately the success or failure of a transition economy can be traced in large part to the performance of its entrepreneurs (Desai, 2011). However, in the particular case of Iraq, the transition nature of the economy, the post-conflict context, the reliance on an oil-focused economy and attempts to sideline the large public sector and artificially promote idealized, pro-market blue prints has proven to be counterproductive (Yousif, 2016). This has also been seen, in terms of oil-focused economies by Farzanegan (2014), where higher dependence on oil rents has a significant dampening effect on new business formation density.

A common notion is that entrepreneurship, and indeed, most private sector activities, come to a halt during conflict within and between societies (Desai, 2011). This aspect, in particular, is pertinent to Iraq and the KRI, if not to the region at large, as per the decades of armed conflict. However, economic exchanges continue to take place even during conflict and can be very profitable, and the post-conflict economy hosts many opportunities for those that can find ways to exploit them, (Desai, 2012). In post-conflict economies, entrepreneurship has the potential and can bring innovations in products and processes, as entrepreneurial people can usually reach target populations more efficiently than public sector resources. The resilience of the private sector in such environments can come jointly from the ability of entrepreneurs to identify opportunities and their ability and willingness to bear the associated risks (Desai, 2011). Entrepreneurs are consistently present and particularly critical during periods of post-conflict recovery and transition, and where inroads towards stability can be made (Desai, 2011). Still Desai (2011) claims that institutions are critical to determining how much, what kind, and what effects of entrepreneurship there will be and this same matter, on the importance of institutions, is provided also by Yousif (2016). Desai (2011), emphasizes the importance of local conditions and its effects on incentives to entrepreneurship development and the forms it may take as a consequence of the high diversity of Iraq's regions in terms of geographic conditions, location, natural resources, population trends, strong culture of tribalism and community self-governance. Thus culture also provides for a large, if not profound, impact on all aspects of entrepreneurship in societies, Licht & Siegel (2008). A social system that places a high value on innovation, risk-taking and independence is more likely to produce entrepreneurial events than a system with contrasting values, Licht & Siegel (2008). Core social institutions required for promoting entrepreneurship are well defined property rights and the rule of law, Licht & Siegel (2008). However, it is the agricultural and industrial revolutions of the eighteenth and nineteenth centuries in Europe and the North Americas that finally produced the modern multi-faceted image of the entrepreneur, as the overall growth rate of each productive sector depends on the talent of the best entrepreneur present in the sector, because it is his or her ideas that are imitated in future periods, Ricketts (2008).

Even though the industrial revolution was constantly considered in research on entrepreneurship, the same cannot be said for agriculture. The evidence demonstrating the exclusion of agriculture from entrepreneurship research is overwhelming, Alsos *et al.*, (2012). This however can be mediated by the fact that agriculture has been seen as a 'special case industry' as a result of the political and strategic nature of food security as well as by powerful interest groups. This has more often than not translated into public support for agriculture, for example subsidies, and consequently, the sector was seen, as being non-entrepreneurial as a result of such obscuring public policies. But, in fact, agriculture as an economic sector provides for risk and uncertainty² as per its very nature. There are many risks and uncertainties that range from production, marketing, technological, financial, policy and human matters. For example, the quantity and quality of output derived from a bundle of inputs cannot be known with certainty, Moschini & Hennessy (2001). This should entail that farmers as operators in the agricultural sector are risk takers and managers, regardless if they commercialize or do not commercialize their production outputs or not, FAO (2015). In fact, small-scale farmers can be considered as entrepreneurs: They raise capital from multiple sources and invest in productive assets; for many of them even a spade or a bicycle are important assets. They make decisions and take both risks and profits. And agriculture involves many decisions: What to plant, which inputs to use

² When the chance or probability of an outcome is known in advance this is called risk. When the chance of an outcome is not known in advance this is called uncertainty.

and how, when to plow, to seed, to harvest; how much to keep for consumption in the household and how much to sell to raise cash, or how much to store. Smallholders often make these decisions in an economic environment in which markets do not function well, if at all, and which also are subject to many risks, such as adverse weather and price surges (FAO, 2015). Thus, seeing the context of operating in the agricultural sector, farmers are seemingly entrepreneurs, who may be called agripreneurs, who entail agripreneurship. On this specific point a classic question posed in debates about agricultural entrepreneurship is whether agricultural entrepreneurship is different from entrepreneurship in non-agricultural firms and as per , Lans *et al.*, (2013) state the answer is yes and no, depending on the type of research and research paradigm employed, while for Fitz-Koch *et al.* (2017) agripreneurship is different from non-agricultural entrepreneurship and should be considered in a class of its own. This is further reinforced historically as several of the founding figures of entrepreneurship theory, for example, Cantillon, Say and Mill wrote at the time when agriculture was the predominant industry, and many of the examples they used to illustrate entrepreneurship were derived from agricultural production, Alsos *et al.*, (2012).

Consequently and in line with the above, the main objective of the research was to ascertain the current knowledge on entrepreneurship in agriculture at the farmer level, so as to attempt to better understand i) agripreneurship in the KRI; ii) possibly provide a clear and concise definition of agripreneurship and who is an agripreneur in the KRI; iii) how this can possibly provide for a more thriving agro-industry as farmers are at the basis of any agricultural development process; iv) attempt to ascertain how this could possibly provide positive spills over effects on the development of the agri-food sector in Iraq in general and in other countries in the region; v) and attempt to further ascertain if agripreneurship is in fact a 'new' paradigm of its own, separate from non-agricultural entrepreneurship, thus contributing to furthering the call provided by Fitz-Koch *et al.* (2017) for more research in the realm of agripreneurship.

Methodology

The nature of the topic and the related exploratory research questions were considered to be novel for the particular region under scrutiny, seeing its background, but this could not be ascertained with a degree of statistical certainty and consequently it was deemed more appropriate, from a scientific point of view, to consider and implement a literature review³ as this could effectively and efficiently attempt to broaden the knowledge base. The literature review process conducted thus can be considered as a "data collection tool". It focused primarily, but not exclusively, on a qualitative type of literature as this attempts to ascertain a better understanding of human behavior and the reasons that govern human behavior: it investigates the why, when and how, more than the what and where of quantitative research. The literature review method was seen as enabling an initial and better understanding of the subject matter and research questions to the specific region under consideration, a form of 'embedded study' that provided for contextualization. It could also help to possibly refine the research questions and could also potentially identify areas where there were/are gaps in the research as well as provide guidance on which gaps can be the most appropriate for the needs of the region in the quest for private sector development in the agricultural and food sectors. Further, the literature review research method was seen as a first step in a hopeful wider research, that would also consequently provide research guidelines for primary field research to be conducted. Moreover, the choice of the literature review research method was also considered as more viable as per time and budget concerns.

The literature research was conducted using on-line databases of Google Scholar, EBSCOhost, JSTOR, Wiley online library, and the World Bank e-library. A total number of 102 publications, were reviewed⁴ and comprised overall in the majority of journal articles, but also included case studies, research reports, books, survey reports, published government policies and conference papers. The literature research followed a systematic and narrative perspective to possibly enable on the one hand a comprehensive background of understanding of past and current knowledge, using intrinsic case

³ The literature review was conducted between November 2017 and April 2018 over an eighteen-week period.

⁴ A total of 137 publications were found, but only 102 were reviewed in-depth as they matched the set quality criteria.

studies, as well as possibly identifying gaps in the literature, but also on the other hand considering, importantly, inclusion and exclusion criteria in identifying pertinent literature, and the quality of the literature. The criteria set to identifying pertinent literature to attempt to respond to the research questions were: searching for publications in English⁵, key word search as well as combining key search words. For example, on line databases may use the 'Boolean' option using 'AND', 'OR' and 'NOT' options. The key words used for searching online databases were: 'entrepreneurship AND agriculture' ; 'entrepreneurship AND agriculture AND Iraq'; 'entrepreneurship AND agriculture AND Kurdistan region of Iraq'; 'entrepreneurship AND agriculture AND Kurdistan'; 'Agripreneurship ' ; 'Agri-preneurship'; 'Agri preneurship'; 'Agripreneurship AND Iraq ' ; 'Agripreneurship AND Iraq'; 'Agri preneurship AND Iraq'; 'Agripreneurship AND Kurdistan region of Iraq' ; 'Agri-preneurship AND Kurdistan region of Iraq'; 'Agri preneurship AND Kurdistan region of Iraq'; 'Agripreneurship AND Kurdistan' ; 'Agri-preneurship AND Kurdistan'; 'Agri preneurship AND Kurdistan'; 'Agripreneur' ; 'Agri-preneur'; 'Agri preneur'; 'Agripreneur AND Iraq ' ; 'Agripreneur AND Iraq'; 'Agri preneur AND Iraq'; 'Agripreneur AND Kurdistan region of Iraq' ; 'Agripreneur AND Kurdistan region of Iraq'; 'Agri preneur AND Kurdistan region of Iraq'; 'Agripreneur AND Kurdistan' ; 'Agri-preneur AND Kurdistan'; 'Agri preneur AND Kurdistan'. Such key words were useful in providing for criterion sampling and thus enhanced the validity of the sample of literature found. The quality criteria set for selecting the literature for review were: the relevance to the subject matter; conceptual/theoretical-based research; provides differing theoretical ideas; primary source-based (credibility; reliability; ecological validity); secondary source –based; location; derived from an identified and reliable source (scientific journal publisher, reputation of publisher); date of publication (not older than 70 years); and peer review conducted.

The analysis of the literature was done keeping in mind that literature can report both quantitative as well as qualitative information. However, from the initial and preliminary phases of the literature review, there was evidence to suggest that much of the information found would require a more qualitative analysis, a meta-synthesis, more than a meta-analysis. The analysis was based on grounded theory: the systematic analysis of data pertaining to the phenomenon, Gray (2009), via comparison and coding and not just merely ordering a mass of data which emerged from the analysis, Strauss (2005). Thus the literature was analyzed using a non-statistical technique to integrate, evaluate and interpret the findings from multiple qualitative studies, combined to identify common core elements and themes, the current status on knowledge, find and identify research gaps as well as explore for new areas that may not have been covered in past and current literature. The overall intended outcome of the analysis being not only to ascertain the past and current knowledge, but also to identify topic areas for consideration as well as their viability for future research, which could possibility involve more secondary and novel primary research.

Results

Defining agripreneurship

Usually and traditionally the sector of agriculture is considered to be low-tech, with limited dynamics, dominated by small family firms, who focus on doing things better rather than doing new things. However, over the past decade, the situation has changed dramatically due to economic liberalization, a reduced protection of agricultural markets, and a fast changing, more critical, society, Lans *et al.*, (2013). In these aspects of change entrepreneurial orientation is a helpful, well-established, construct, originally from general entrepreneurship research, but is increasingly being used in agricultural entrepreneurship research, Lans *et al.*, (2013). Entrepreneurship development in rural and agricultural communities is a multidimensional and complex process. This process must adhere to particular specifications and conditions, and it requires extensive attention and efforts in developing macro-policies and strategies, providing the necessary infrastructure, and developing and implementing a comprehensive plan, McElwee (2005).

⁵ Consideration of the fact that literature may be available in Kurdish and Arabic could possibly curtail inferences on the results to a wider population and as such it is recognized that a literature search of this nature was not exhaustive and that consequently it will be subject to ongoing iteration.

Dollinger (2003) defines entrepreneurship in agriculture as the creation of innovative economic organization for the purpose of growth or gain under conditions of risk and uncertainty in agriculture. Estahbanaty (2013), defines agricultural entrepreneurship as a value creation process composed of a unique set of resources to exploit and take advantage of opportunities in rural areas. More specifically Bairwa *et al.*, (2014) define agripreneurship as the profitable marriage of agriculture and entrepreneurship. Rao and Kumar (2016) define agripreneurship as the entrepreneurial process taken up in agriculture or allied sectors. It is the process of adopting new methods, processes, techniques in agriculture or the allied sectors of agriculture, for better output and economic earnings: agripreneurship converts agricultural activity into an entrepreneurial activity. Yousoff *et al.*, (2015), define agripreneurship as agricultural entrepreneurship activities which are regulated to produce, distribute, market, or transport agricultural products to generate income, Nagalakshmi and Sudhakar (2013). Narendran and Ranganathan (2015) define agripreneurship as generally, sustainable, community-oriented, directly-marketed agriculture. Mukembo and Edwards (2016) define agripreneurship as the application of entrepreneurial principles to identify, develop, and manage viable agricultural enterprises/projects optimally and sustainably for profit and improved livelihoods. Volkmann *et al.*, 2010, define agripreneurship as it involves taking risks and accepting uncertainties to develop a business venture with the goal of getting a profit or returns on the investment. Macher (1999) defines agripreneurship as a profitable marriage of agriculture and entrepreneurship, whereby agriculture is run as a business venture. Uneze (2013) defines agripreneurship as a concept specific to agriculture and drawn from wider entrepreneurship.

In these definitions above entrepreneurship and agriculture merge and integrate in an attempt to provide a specific definition of what is entrepreneurship in agriculture, in other words agripreneurship. The definitions provide some interesting and unique aspects: 'profitable marriage of agriculture and entrepreneurship', 'directly-marketed agriculture', 'new methods, processes and techniques in agriculture', 'converts agricultural activity into an entrepreneurial activity', 'using a unique set of resources', 'rural', 'sustainable', 'community oriented' and 'improved livelihoods'. These seem to take into consideration some of the unique characteristic of the agricultural sector, typically not very commercially-oriented, which uses unique sets of resources (land, water,etc.), is rural, sustainable and usually socially-oriented. This seems to point to a far more unique, rural and social inclination to entrepreneurship in agriculture then possibly in other economic sectors and seemingly leads to the creation of entrepreneurship in agriculture as more of a philosophy then as of a straight forward mechanistic process. There are also some indications from the above that agripreneurship does have some unique characteristics, which may lead it away from the more theoretical constructs of generic entrepreneurship and how it is defined. This is further reinforced, for example, as documented previously, for example in Western Europe, where in the 18th century entrepreneurship was being amply practiced in the agricultural sector, along with that in the industrial sector, see Coulter (2003). Thus one question that can be raised here is why only in recent decades has more attention been devoted to research on agripreneurship as a possible engine of agricultural economic development and unique definitions have been sort of , if at the inception of the term entrepreneurship lay the agricultural sector? This same question has been raised by Aslos *et al.*, (2012) and Fitz-Koch *et al.* (2017).

However, these interesting aspects, along with the above definitions provided by numerous authors, could possibly be used as a basis to commence to better understand agripreneurship in the KRI and possibly to provide for a geographical-location specific definition that is economically, and importantly socially and culturally bound to the KRI. These aspects could help in forming a primary and initial construct for agripreneurship in the KRI, which could then be further investigated via field research. Consequently, the unique aspects found in the multitude of definitions are provided again in Table 1.

Table 1: Unique aspects of agripreneurship

Profitable marriage of agriculture and entrepreneurship
Directly-marketed agriculture
New methods, processes and techniques in agriculture
Converts agricultural activity into an entrepreneurial activity
Using a unique set of resources
Rural
Sustainable
Community –oriented
Improved livelihoods

Defining agripreneurs

Entrepreneurship requires tasks that can be completed individually or in groups and these tasks usually require creativity, initiative and willingness to take risks: this confirms that agricultural producers are basically entrepreneurs because they take risks in order to achieve positive business results, Njegomir *et al.*, (2017). Consequently it seems that farmer entrepreneurs produce exclusively for the market: as a small entrepreneur, the farmer follows the market, price movements and changes and in accordance with the market creates his or her business policy, Njegomir *et al.*, (2017). Thus entrepreneurial orientation can be defined as a farmer's willingness to innovate to rejuvenate market offerings, take risks to try out new and uncertain products, services and markets, and be more proactive than competitors towards new marketplace opportunities, Lans *et al.*, (2013). The original entrepreneurial orientation construct combines three key elements of entrepreneurial behavior, namely, innovativeness, risk taking and pro-activeness, Lans *et al.*, (2013).

The farmer entrepreneur has a special foresight with regards to resource and environmental constraints, to learn from others and his or her own past, according to modern and indigenous knowledge, Estahbanaty (2013). Farmer-entrepreneurs are market-oriented, forward-looking and amenable to taking calculated risks, creating new products, adapting new technologies, and innovating in their use. As they pay more attention to the survival of their businesses in the long run, they are willing to make them more sustainable, Faria and Mixon (2016). As entrepreneurs, this new type of farmer is always looking for new opportunities to grow, improve, expand his or her business and adopt new technologies to farming, Faria and Mixon (2016). The farmer-entrepreneur produces a clear picture in his mind of what is possible and the future he (or she) wants. He knows that what is possible is determined by the market. The farmer-entrepreneur is always looking for new opportunities. He (she) knows that new opportunities are found in the market. The farmer-entrepreneur wants to make profits. He (she) knows that profits are made in the market, FAO (2013). An 'agricultural entrepreneur' is an individual or group with the right to use or exploit the land or other related elements required to carry out agricultural, forestry or mixed activities, Suarez (1972). Kumari and Prasad (2017) define agri-entrepreneurship as a way toward self-sustainability. Damarla and Kumar (2015) see an entrepreneurial farmer has to take advantage of opportunities. A farmer with an entrepreneurial spirit energetically, enthusiastically and carefully makes many different decisions about his (or her) farm activities in the context of the value chain that influences the profits of the farm business till the produce reaches the consumer, Damarla and Kumar (2015).

More specifically Carr and Roulin (2016) see an agripreneur that works within a food system, located in but not necessarily limited to, a rural location. An agripreneur identifies an opportunity within a market to directly produce food stuffs, such as vegetables, fruit, dairy, meat, fish and grains utilizing innovative and sustainable production methods. The agripreneur may also consider the full range of 'agribusiness' opportunities within the extended food system that can include activities as diverse as processing, packaging, logistics, services, cooking and recycling waste. Rao and Kumar (2016) define an agripreneur as an innovator, who drives change in a rural economy, by adopting innovative ideas in agriculture and allied sectors. He takes risk, adopts innovation, creates new ways of doing things and taps new markets. Bairwa *et al.*, (2014) define an agripreneur who is someone who undertakes a variety of activities in the agriculture sector in order to be an entrepreneur. As

defined by Nagalakshmi and Sudhakar (2013) an agripreneur is an entrepreneur whose main business is agriculture or agriculture-related. Macher (1919) defines an agripreneur as an individual who runs an agripreneurship venture: he (or she) is said to be someone who practices agriculture (farming activities) at their own risk. An agripreneur is a self-employed business owner who creates wealth within agricultural industry through pursuance of a venture, Aleke, Ojiako, and Wainwright (2011). An agripreneur may be defined as someone who undertakes a variety of activities in agriculture and its allied sectors to be agripreneur: explicitly an agripreneur is a risk-taker, opportunist and initiator who deals with the uncertain agricultural business environment of the farm, Tripathi and Agarwal (2015). Agripreneurs may be defined as innovators who drive change in the economy by serving new markets or creating new ways of doing things in the agriculture sector, thus, an agripreneur may be someone who undertakes a variety of activities in the agriculture sector in order to be an entrepreneur, Ndedi (2017). Agripreneurs in general need be proactive, curious, determined, persistence, visionary, hardworking, honest, innovative, creative, with integrity and with strong management and organizational skills, Ndedi (2017).

From the above plethora of definitions on agripreneurs, as per agripreneurship, there are attempts to merge and integrate the entrepreneur and the farmer as one. Interestingly there are some aspects that arise here related to agripreneurs that are seemingly unique: ‘has a special foresight with regards to resource and environmental constraints, to learn from others and his or her own past, according to modern and indigenous knowledge’, ‘willing to make it (the farm business) more sustainable (in the long term)’, ‘adopt new technologies to farming’, ‘an individual or group with the right to use or exploit the land or other related elements required to carry out agricultural, forestry or mixed activities’, ‘works within a food system, located in but not necessarily limited to, a rural location’, ‘consider the full range of ‘agribusiness’ opportunities within the extended food system’, ‘creating new ways of doing things in the agriculture sector’ and ‘utilizing innovative and sustainable production methods’. These seem to take into consideration some of the unique characteristic of the farmer entrepreneur, agripreneur: has foresight in working with natural resources and the constraints these can have, not only in the short term, but if abused, such natural resources can lose their productivity, hence must be sustainable in their use for the long term; combines indigenous knowledge with modern knowledge; can also work in a group of farmers; works within a food system and does not limit him or herself to any stage of the food system as can possibly add value. These can all be used, along with the above definitions provided by numerous authors, as a basis to commence to better understand agripreneurs in the KRI and possibly to provide for a geographical-location specific definition that is economically, and importantly socially and culturally bound to the KRI. These aspects could help in forming a primary and initial construct for what is an agripreneur in the KRI, which could then be further investigated via field research.

The unique aspects found in the multitude of definitions of who is an agripreneur are provided again in Table 2.

Table 2: Unique aspects of agripreneurs

Has a special foresight with regards to resource and environmental constraints, to learn from others and his or her own past, according to modern and indigenous knowledge
Willing to make it (the farm business) more sustainable (in the long term)
Adopt new technologies to farming
An individual or group with the right to use or exploit the land or other related elements required to carry out agricultural, forestry or mixed activities
Works within a food system, located in but not necessarily limited to, a rural location
Consider the full range of ‘agribusiness’ opportunities within the extended food system
Creating new ways of doing things in the agriculture sector
Utilizing innovative and sustainable production methods

However, there is a need to consider here three aspects in searching for a definition of an agripreneur for the KRI. The first is that FAO (2015) states that all farmers, regardless if they commercialize or not, are agriprenerus and much the same is stated by Njegomir *et al.*, (2017) and

Alsos *et al.*, (2012). In this regard many other definitions point to the fact of commercialization to be an agripreneur and also refer to being 'new' types of farmers. This important and interesting contention will need to be considered. The second aspect that needs to be considered is that of agripreneurs working as a group, as this comes up in more than one definition, in other words collective agripreneurs. The third aspect is provided by McElwee (2005) and Alsos *et al.*, (2012), in that to conceive farmers as a homogeneous group is a mistake and consequently definitive definitions of farmer entrepreneurship and the entrepreneurial farmer cannot be provided. This seemingly pointing to the fact that more definitions of an agripreneur may be required, seeing the heterogeneity of farmers, even within the same geographic location, and thus this will need to be considered carefully.

Agripreneurs and agripreneurship in other countries

Having seen the many definitions of agripreneurship and that of the agripreneur, examples were sort from different countries as per providing evidence based on documented results of primary research, from various countries. These are presented here below in short form:

As reported by McElwee (2005), in Poland, entrepreneurship is a relatively recent phenomenon: The emergence of the free market economy has resulted in the development of a new spirit of enterprise and responsibility for farmers running their own businesses: farmers believe that being independent will make them more adaptive to the market. A main conclusion is that a major challenge for the agricultural sector is to enable farmers to develop their entrepreneurial skills and this requires economic support and greater emphasis on education and training.

In the Republic of Serbia, Njegomir *et al.*, (2017), report that entrepreneurship is inseparably connected to agricultural production in Serbia. However, this connection stems from the interpretation of entrepreneurship as an 'undertake' of business activities. Unfortunately, in Serbia entrepreneurship in agriculture in terms of combining primary agricultural production and the next phases of processing of primary agricultural products does not exist. Also, often agricultural production is realized only in the form of growing certain crops types that barely allows the return on investments. Entrepreneurship partially occurs in fruit growing, for example in growing hazelnut and raspberry, and also occurs in farming and animal husbandry at the same time.

In India, and as reported by Nagalakshmi and Sudhakar (2013) the agripreneurs of Dharmapuri village are between the ages of 31-40, are literate, use their smallholdings in productive ways and try to avoid intermediaries in their activities of agriculture. The agripreneurs of Dharmapuri village use biodegradable and natural fertilizers for their commercial crops, thus reducing usage of chemicals to avoid soil erosion. They partly depend on government for finance, seed capital and marketing assistance. They have created their own agripreneurs associations to solve their problems. Still in India, Rao and Kumar (2016) state that agripreneurs play various roles: there is a chance to go innovative with regard to use of fertilizers and pesticides, adopting multiple crops simultaneously, changing crops season by season to protect the quality of the soil, and using machines to reduce the cost of labor. In Uttar Pradesh contrary to common belief, caste, farm size, and age of the farmers are not necessarily major constraints for agripreneurship. Even less educated small farmers who are old in age are agri-entrepreneurs, Singh (2013).

In Nigeria among arable crop farmers in Imo State, sixty household entrepreneurs were selected using multi-stage random sampling techniques. A reasonable proportion of the farmers identified personal intension, wanting autonomy and displacement/disruption in life as the key drive to entrepreneurship development in the area. Entrepreneurship enterprises have been invaluable to farmers in the area. However, farmers complained of poor access to entrepreneurship information, inadequate start-up capital and a long distance between farms and market in the area, Esiobu *et al.*, (2015).

In east Africa entrepreneurs operate within homogenous, tightly knit social networks of trusted individuals. However, the challenge of expanding beyond such networks to access new knowledge, skills and resources can be met only by establishing relationships with individuals outside their existing sphere of trust. The process of expanding social networks depends upon the establishment of trust that functions as glue in the building of productive business and social relationships. The rapid emergence of cell phone technologies in East Africa creates an opportunity for entrepreneurs to

selectively expand their social networks to include business and social contacts they judge to be worthy of their trust and able to meet their needs as entrepreneurs, Mehta *et al.*, (2011).

In Zanjan province, Iran, Rajaei *et al.*, (201) find that from the perspective of cooperative managers the most important factors in strengthening entrepreneurship in agricultural cooperatives are: providing financial support and tax breaks, reform the banking laws and making regulations to adjust with entrepreneurs' conditions. Results also demonstrated that there is significant relationship between the entrepreneurial scores of managers and education level of board members, the total number of cooperatives and success level of the cooperatives.

The agricultural sector in the Kurdistan region of Iraq: agripreneurship and agripreneurs in the Kurdistan Region of Iraq

The Kurdistan region is highly suited for agriculture as it boasts large areas of arable land and fertile soil. The varied topography and associated rainfall regimes have created three basic micro-climatic zones; high rainfall (700-1100 mm), medium rainfall (400-700 mm), and low rainfall (under 400 mm). In terms of produce; the high-rainfall zone contains mainly fruit orchards, wheat occupies most of the medium-rainfall zone, and barley is the main crop in the low-rainfall zone, Baban (2015). Winter wheat and barley are planted in the autumn (October-November) and harvested in the late spring (April-June) in accordance with the rainfall pattern. Unfortunately, agriculture and food production declined significantly due to several factors occurring in the period leading up to the Iraq war of 2003. These included: a three-year drought that devastated agricultural production in much of the Middle East during 1999-2001; a growing dependence, since early 1997, on the United Nations Oil for Food programme for basic foodstuffs which undermined the need for local food production; the central government's total focus on the military sector; failed policies, limited investment and deteriorating infrastructure; and serious land ownership and water rights issues, Baban (2015).

According to the 2013 socio economic report provided by the Statistics Office of the Ministry of Planning –KRG, the agricultural sector in the KRI has close to 4.9 million donums⁶ of arable land which represents nearly 35% of its total area. Erbil governorate has more than twice the arable land than each of the other two governorates: Sulaimaniyah and Duhok. Above 87% of arable land is rain fed (rather than irrigated), which leaves it vulnerable to the vagaries of weather. Most agricultural production happens in winter. Close to 55% of the arable land is cultivated in winter (2.68 million donums). Sulaimaniyah has the highest planted area, cultivating nearly all its arable land, while Erbil the least (cultivating less than 30% of its arable. An examination of the farming practices in the region shows that the main agricultural crops are traditionally produced by repeating annual growing patterns based on local indigenous experience without much consideration for bio-climatic factors; thus, the production levels are not stable and may ultimately be damaged due to changes in biological boundary conditions imposed on the region by climate change, Baban (2016). Traditional farming methods dominate and policy and practice tends to provide all provinces in the KRI with similar subsidies, even though they seemingly cultivate identical crops during the same season. The outcome is low productivity as suitability of geographical areas for various agriculture alternatives are not utilized. In addition to flooding the market with large quantities of identical local agricultural produce during a narrow time frame, which lower's demand and prices are not competitive, Baban (2016). According to MERI (2016) there are higher production costs, low technical capacity in production and marketing and the presence of oligopolies.

The Region has followed a steep development curve since gaining autonomy despite several past and present challenging conditions which include geopolitics, national trauma and harsh economic circumstances, Baban (2016). In the past, for example, and in the wider context of Iraq, business ownership was restricted among certain groups receiving favorable treatment, whereas other businesses faced heavy disincentives imposed by corruption, interference of the state in business operations and, often, relative power and resource exclusion (Desai, 2011). The result was an economy marked for decades by economic entrenchment and a weak culture of competition. In recent years, the unpredictability of social violence has exerted further damage on already weak or inadequate systems and business infrastructure (Desai, 2011). However, in an environment of constant

⁶ A donum is equivalent to 2500 m²: a quarter of a hectare

flux and change, entrepreneurial opportunities abound in many differing sectors, including that of growing food (Desai, 2011).

In terms of the agricultural, livestock and fisheries sectors the main areas of investment, as provided by the KRG- Board of Investments report of 2012, have been in olives, mushrooms, cucumbers, poultry and eggs. The board also indicated other possible investment opportunities in oat, corn, sunflower, vegetables (in particular tomatoes and eggplants), fruits (in particular grapes, apples, peaches, pomegranates, pears, apricots and figs), livestock (red meat and milk in particular), and fishing (increasing catches in rivers and lakes mainly). These agricultural sub-sectors for potential investments have also been found to be viable in a research of foreign direct investment in the KRI conducted by Unegbu and Okanlawon (2015).

The sector employs just 5 % of the working population, this was previously in 2012, 6 %. A higher proportion of employment is found in Sulaimaniyah (6.8%) than the other two governorates and has the smallest share in Duhok(4.0%), while the share of employment in agriculture is low both for men (4.8%) and women (7.9%), Ministry of Planning-Statistics Office (2013). For example, in Duhok, for general employment matters the situation is not favorable as there is a lack of access to financial capital and a lack of a functional employment agency or system that matches employers with potential employees, Tearfund (2015). Seeing this situation, self-employment in general in the form of entrepreneurs and entrepreneurship and more in particular as agripreneurs and agripreneurship in the agricultural sector would seem viable. Still in Duhok, as reported by Eklund *et al.*, (2017) the land is becoming less productive, more resources need to be focused on improving rural infrastructure and services to increase access to education and health care: a lack of services in rural areas is driving people to cities to seek better opportunities, which means that the local population's incentive to increase agricultural activity is low. Although agribusiness' large farms can be a solution to reduce unemployment and improve technology, they have serious implications on the environment as well as on the social fabric, as they often replace smaller farms. Locals have strong ties to their lands and traditional agricultural practices are still prevalent. In this context, supporting small-scale traditional agriculture development might be more sustainable and feasible. Practices of small-scale agriculture in self-rule communities can serve as an alternative model to top-down large-scale agriculture, Ekuland *et al.*, (2017), as well as foster agripreneurship and agripreneur at the small-scale level.

According to farmers, as provide by Appropriate Agriculture International Co, LTD (2013), problems of vegetable production in the Kurdish region are the lack of shipping opportunities and the undeveloped distribution business infrastructure. Vegetables need to reach consumers as quickly as possible after being collected, but such a sales and transport business is nonexistent. Farmers indicated the necessity of securing transport routes so that products that have particular harvesting periods can reach large consumer areas while the products are still fresh, Appropriate Agriculture International Co, LTD (2013)

In order to encourage the entrepreneurial sphere, the KRG introduced the Investment Law No. (4) of 2006. The Investment Law has been introduced with the strong belief that small and medium enterprises (SMEs) should be given the opportunity to take a central role for supporting the economy since always it has been a more robust employer of the unemployed compared with large firms. However, the promotion of entrepreneurs in the Republic of Iraq and /or KRG has no (or a very short) history⁷ and it represents a totally new approach to overcome the economic crises in the country pursued by policy makers, Shehab *et al.*, (2017).

In an example comparison between non agriculturally-based small and medium entrepreneurs and large entrepreneurs in the city of Erbil, small and medium entrepreneurs created relatively more employment opportunities and capital investment than their counterparts of large entrepreneurs for the

⁷ For example in the Republic of Iraq 2014 strategy on private sector development 2014-2030, for entrepreneurship the following has been foreseen: i) provide advisory, counseling, business planning training and networking services; ii) establish a fund to provide seed capital, soft financing and loan guarantees; iii) establish a special programme to create business opportunities for the private sector; iv) development of industrial zones, business incubators and business development services; v) establish a dedicated unit to foster gender awareness and gender inclusion in private business and a public awareness campaign.

time series of 2006 to 2015, Shehab *et al.*, (2017). Still Bartnick (2017) reports on entrepreneurship in general in Iraq and in the KRI and aspiring entrepreneurs face numerous difficulties. They must operate in an uncertain regulatory environment that neither protects intellectual property nor offers clear guidelines around which they can develop their business plans. Once they have developed a business plan, they must navigate a bureaucratic labyrinth in order to perform even basic tasks like incorporating their business. And even the most promising startups face significant capital uncertainties. But most of all, entrepreneurs lack a clear roadmap to success and the accompanying attitude to drive them there. Bartnick (2017) provides that the key constraints to developing entrepreneurship in the KRI are finance, managerial skills, globalization and FDI. There is also a series of aspects provided for improving the situation: business plans, business centers, mentoring, and financial support.

As from the above literature (Baban, 2015 & 2015; Desai, 2012; Unegbu & Okanlawon, 2015; TearFund, 2015; Eklund *et al.*, 2017; Appropriate Agriculture International Co, LTD, 2013; Shehab *et al.*, 2017; Bartnick, 2017) no literature was found specifically on agripreneurship and on agripreneurs in the KRI.

Conclusions

From the above findings some interesting conclusions can be drawn. The literature review did not find any specific literature on the subject matter of agripreneurship and agripreneurs in the KRI. This could be a result of the common and known limitations of the literature review method, as evidenced in the methodology section of the paper. However, it may also derive from the fact that commonly the agricultural sector is not seen as being entrepreneurial as per its traditional ways of doing in rural areas and being 'protected' and 'subsidized' by the public sector, which may depress any entrepreneurial activity. It could possibly also signal the limitations as exposed by Alsos *et al.*, (2012) and Fitz-Koch *et al.* (2017) in terms of entrepreneurship research not being widely practiced in sector specific contexts, in this case agriculture. There could also be a possibility that seeing the context of the region: conflict, post conflict, public economy intervention, and oil-based economy have all 'obscured' entrepreneurship in farming from a research point of view. As seen previously in conflict and post conflict zones the common adage is that entrepreneurship does not occur, but as per the literature findings, this is not the case. The same may be valid for oil-based economies, and as reported by the literature, these commonly tend to 'depress' entrepreneurial activities as well as research into such a subject-matter area. Further in such a context, public policies devoted to agricultural development, and in particular farmer development, have only been fairly recent for the KRI in specific and may be mismatched to the heterogeneity of farming and may not address, as outlined in the literature findings, the specific local conditions (tribalism, etc) found throughout Iraq and the KRI. The combination of these factors may be the reasons why there is no specific literature devoted to entrepreneurship in farming, but this could not be ascertained with certainty, a high degree of confidence, in this exploratory research. Overall, though, this combination of factors could indicate that the current status of knowledge in the KRI may be low, but may not be inexistent, but to verify this, undoubtedly there is a need for further primary research to be carried out.

Seeing this need for further research to be carried out and the evidence that far more research needs to be carried on entrepreneurship at the sector level, the ample literature available on agripreneurship and agripreneur definitions and case study examples found in other countries, could provide for the initial construct required for framing definitions of agripreneurship and agripreneurs in the KRI. These have been ascertained in this research (see Tables 1 and 2) and can be used as a basis to build the foundations of an appropriate research guideline that can be used also to set the boundaries of such a research. Key words have been found in terms of definitions as ascertained from the literature research and these can be the first step in such a process. To recap the unique aspects found for agripreneurship and agripreneurs in the literature review these can be found in Table 3.

These unique aspects can be used as guidance in making a construct to identify agripreneurship and agripreneurs in the KRI, which can be used in subsequent primary research. However, and importantly for agripreneurs three considerations need to be kept in mind, as provided previously: commercialization or non-commercialization of farm produce, group agripreneurs and only one definition may not be suitable for all as per the heterogeneity of farmers.

Table 3: Unique aspects of agripreneurship and agripreneurs

Agripreneurship	Agripreneurs
Profitable marriage of agriculture and entrepreneurship	Has a special foresight with regards to resource and environmental constraints, to learn from others and his or her own past, according to modern and indigenous knowledge
Directly-marketed agriculture	Willing to make it (the farm business) more sustainable (in the long term)
New methods, processes and techniques in agriculture	Adopt new technologies to farming
Converts agricultural activity into an entrepreneurial activity	An individual or group with the right to use or exploit the land or other related elements required to carry out agricultural, forestry or mixed activities
Using a unique set of resources	Works within a food system, located in but not necessarily limited to, a rural location
Rural	Consider the full range of ‘agribusiness’ opportunities within the extended food system
Sustainable	Creating new ways of doing things in the agriculture sector
Community –oriented	Utilizing innovative and sustainable production methods
Improved livelihoods	

Further consideration needs to be taken to the other important aspects found in the literature review that agripreneurship and agripreneurs need to be seen in a ‘class’ of their own in terms of entrepreneurship. There is ample evidence to suggest this from the above literature review, not only based on historical literature, for example those derived from Cantillon and Say, but also from more contemporary literature, that of Alsos *et al.*, (2012). Consequently a new paradigm is needed for entrepreneurship in agriculture and this conclusion is in line with that of Fitz-Koch *et al.*, (2017). Moreover, there is a need to provide definitions that are geographically-location specific and which are economically, and importantly socially and culturally bound to the KRI. This second conclusion reinforces the first conclusion above, as clearly more research is required in terms agripreneurship and agripreneurs in the KRI and this will contribute to the many calls for more research with regard to entrepreneurship in agriculture. More research in this area will also contribute to better understanding entrepreneurship not only in agriculture but in agricultural contexts of conflict, post-conflict, economies based on oil revenues and with a history of intensive public economic intervention.

With regard to the possible ‘spill over’ effects of agripreneurship in the KRI to wider Iraq and other countries in the region, as a result of the lack of literature found on the main objective of the research, it is not possible, at this moment in time, to make any inferences on this, save for fostering future research in this area. There could possibly be a two –way learning track that takes place from other countries in the region. For example, Iran has an economy that is strongly based on oil revenues and public interventions, but has a fairly developed agricultural sector, which may signify varying levels of entrepreneurial activities. Consequently, such a research could provide, for example mutual lessons learnt from the KRI and Iran in terms of positive ‘spill over’ effects.

Undoubtedly further field research will also be needed to provide for a better understanding of farmers' needs in terms of becoming agripreneurs and /or more agriprenurial. Consequently, knowing their needs could be invaluable in setting up programmes to develop agripreneurs. As stated by Esiobu *et al.*, (2015), developing entrepreneurial skills of farmers can take two tracks: the first is to amend the social, economic, political, and cultural frameworks that hinders, and foster those that stimulate their development; the second is encouragement of farmers, via their personalities and capabilities, to kindle the development of entrepreneurship. If farming competitiveness is to be improved by nurturing entrepreneurial behaviour, both tracks should be considered.

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