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Research Article

Challenges and opportunities of young farmers in Malta

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Abstract. Agriculture in Malta has seen substantial development over time and serves a number of functions. Malta has fewer young farmers and a smaller labor force than the rest of Europe. This study intends to analyse current trends and features of young farmers in Malta in order to understand their condition and discover strategies to help and promote new recruits into the business. The data came from 202 respondents who made up a representative sample. According to statistical research, there are significant correlations between factors like gender, age, working hours per week, primary sectors, European Union (EU) financing, and organisational membership and job status, or whether young farmers are registered on a full- or part-time basis, or are unregistered. Additional information exposes the educational and training background, trading customs, and other aspects of young farmers. This study provides information on the challenges and opportunities that are experienced by the young farmers, independent of the opinion and thoughts of the older generations.

Keywords: Agriculture; Agricultural entrepreneurship; Farm management; Rural development

1 Introduction

The multifunctional role of local agriculture has been given more importance over the years. Providing information about farmers is crucial not only because they are the workforce driving the sector, but they are also considered as environmental stewards and a source of wealth of information about food production, traditions, and culture (Atriga Consulting Services Ltd. [ACS], 2018). Agriculture in Malta is characterised predominantly by small-scale holdings. The majority of holdings (96.5%), occupy less than five hectares of land (European Commission [EC], 2020), with a total cultivating area of 10,731 hectares as at 2020 (National Statistics Office [NSO], 2023). Furthermore, the number of farms in Malta appears to be decreasing with only 7% of the total number of farms being managed by young farmers (EMCS Ltd, 2021).

The total number of registered persons actively engaged in agriculture amounted to 13,341 in 2020 (NSO, 2023). Young farmers form part of this workforce and are the farming generation of the future (CEJA, 2023). The retreat of the younger generation mentioned by Beeley (1960) is not a new phenomenon in Malta. Cirillo (1955) investigated the attitudes of farmers back in the fifties and stressed the crucial position of young farmers in agriculture in Malta. The aging farming population in Malta is considered to be a pressing issue by various local authorities (ACS, 2018). In 2016, 31.8% of farm holders were older than the age of 64. Only 3.8% of farm holders were under the age of 35 years (EC, 2021). This study primarily aims at investigating the trends and characteristics of young farmers in Malta. For this study, the definition of a young farmer is that of a person working in the industry and is of less than 40 years of age, as described in Regulation (EU) 1305/2013.

In 2020, there were 1239 farm managers who were 40 years old or younger, while in 2010, there were a total of 1260 farm managers who are 40 years old or younger. These figures are related to the number of persons that have registered agricultural land on the Land Parcel Identification System (LPIS) and/or livestock listed in the national veterinary register, as well as farmers who sold their produce at the Pitkali market in 2019. An email (Tanti, 2020) confirms that the various local registers available have been assimilated together to draw the list farmers utilised for the agricultural census conducted in 2020. In 2016, Malta marked a declining share of young farmers (3.8%) of total farm managers, when compared to the 5.1% average at EU level.

The information available at hand instigated the need

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for a study that reveals the status of the local young farming community. Consequently, the main aim of this study was to obtain first-hand information from young farmers, whose situation was analysed in terms of challenges and opportunities.

2 Method

2.1 General Methodology

Deductive analysis is the foundation of the methodology, which examines a sizable sample of respondents. The participants in this study were chosen with the aim to provide information regarding the sort of operations, social life, and opinions of young farmers in Malta. The questionnaire is mostly used to obtain quantitative data. The data input phase converted every piece of acquired data into a digital format, so as to carry out comprehensive statistical analysis.

To achieve both breadth and depth of understanding as well as corroboration, R. B. Johnson et al. (2007) define mixed methods research as the type of research in which a researcher or team of researchers combines participant viewpoints, data collection, and analysis, and makes use of inference techniques.

Responses were acquired during the last stages of data collection using a questionnaire (Table 1) that contained both closed- and open-ended questions (Martin & Hanington, 2012). This was thought to be crucial for obtaining reliable and pertinent data. An extensive set of questions allowed for a thorough analysis of the subject, which would better characterise the particular circumstance of young farmers. Results were compiled and processed after both paper-based and electronically filled questionnaire modalities were made available.

All respondents were guaranteed complete knowledge and had freedom to express themselves because the questions were presented in English and/or Maltese. The primary way of gathering data was through informal one-on-one encounters. Such encounters allowed for unrestricted contact with the young responders while the questionnaire was being finished, as well as gaining insight into the current situation, even though they took more time.

Participants either completed the responses on their own or with the help of the researcher. At the conclusion of the data collecting session, the researcher who had been tasked with composing the responses verbally relayed these to the respondent for verification and validation. Every participant in this study gave their consent to participate. The consent form outlined the engagement of the participant and the conditions of the study. This served as a verbal and written explanation of the scope of this research. This form was then given out and signed by each respondent as confirmation that they had read and understood the terms. All individuals who agreed to complete the questionnaire had the option to stop participating in the study at any time without suffering any repercussions. Additionally, it was stated at the outset that if they were uncomfortable, they could choose not to respond to any of the questions. By using a questionnaire template without any personal information, privacy was protected. To enable responders' traceability, these were listed separately in a Personal Information Sheet.

According to Ary et al. (2006), sample is defined as "a portion of a population". In this study, a sample of young farmers was required to representatively investigate current trends and characteristics of this important segment within the local farming population. The following equation was used to determine the sample size (Mweshi & Sakyi, 2020)

$$\text{Sample size} = \frac{\frac{z^2 \times p(1-p)}{e^2}}{1 + \left(\frac{z^2 \times p(1-p)}{e^2 N}\right)} \quad (1)$$

where N denotes population size, e denotes the margin of error in percentage in decimal form and z denotes the z-score.

Information obtained from the National Statistics Office (Tanti, 2020) revealed that the population size of young farmers having a managerial role who were 40 years old or younger stood at 1239 at the time of research. Considering a margin of error of 6% and a confidence level of 95%, a sample size of 200 young farmers was therefore required. The criteria making young farmers eligible to participate in this study are discussed in the section below.

To select participants a set of criteria was drawn. This provided a greater definition of who might be eligible to participate in this research. All participants needed to meet all the criteria (a – d) as outlined below:

(A) Be of Maltese nationality.
(B) Be between eighteen (18) and forty (40) years old.
(C) Practice agriculture in Malta and/or Gozo.
(D) Be involved in one or more of the activities listed below:
    I production of crops and/or livestock as full/part time farmer,
    II and/or as a subsistence farmer,
    III and/or provides services related to agriculture,
    IV and/or assist family members and/or friends in work related to agriculture.

Due to data protection regulations, it was not possible to obtain contact details of young farmers in Malta from entities such as the Department of Agriculture, the Paying Agency or the National Statistics Office (NSO). An

#	Question	Replies
1	Are you a registered farmer with Jobsplus?	Yes/No
2	Are you registered with Jobsplus as a full time or part time farmer?	Full time/Part time
3	On average, how many hours do you spend working (in agriculture) per week?	Number of hours
4	In which sector/s are you involved?	Various sectors
5	What level of education have you achieved so far?	Levels of education
6	Did you participate in any training (related to agriculture), over the past 5 years?	Yes/No
7	From a scale of 1 to 5, do you think training can help you improve your operations as a young farmer?	5 being most positive, 1 being most negative
8	Does being a farmer allow you to have a good quality of life comparable to young people working in other sectors?	Yes/No
9	Briefly justify your answer for Q8.	
10	Do you use one or more social media platforms?	Yes/No
11	Do you use social media to market your goods/services?	Yes/No
12	How do you sell and market your own products/services?	Direct/Middlemen/Both
13	What percentage of goods/services do you sell directly to the end consumer?	Percentage
14	Are you part of any producer group, co-operative, or organisation?	Yes/No
15	If the answer to Q14 was YES, kindly name the organisation/s.	
16	Have you benefited from any EU agricultural funds?	Yes/No
17	Have you applied for the EU-funded Young Farmer Measure (Measure 6.1)?	Yes/No
18	From a scale of 5 to -5, can you rate your opinion about EU agricultural funds?	+5 as the most positive, -5 as the most negative, 0 is neutral in opinion.
19	In your opinion, what are the current opportunities for farming in Malta?	
20	In your opinion, what major challenges do you face?	

Table 1: Questions used for data collection.

intricate search for young farmers was carried out using information available on the public domain, the social media, and personal contacts. The only public listing of young farmers was available on the EU funds government website having individuals who successfully qualified for sub-measure 6.1 funding under the Rural Development Plan for Malta 2014-2020 (Ministry for European Affairs and Equality [MEAE], 2023).

Through this list, which did not include contact details, individuals were searched for on social media platforms and through personal contacts. While a number of attempts were carried out to make contact, nevertheless, it was not always possible to obtain contact details or to get to know the beneficiaries.

The best method of finding and locating young farmers was through networking. The young farmers contacted during the initial stages of data collection indicated other young farmers who were either family members, friends, or collaborators. This snowball effect (T. P. Johnson, 2014) turned out to be beneficial since a preliminary list of over 300 young farmers was eventually drawn. Having such list allowed for a secondary selection to be drawn as well as a sufficiently enlarged pool of potential participants to meet the study's design requirements.

Furthermore secondary selection permitted balanced data collection from various categories of young farmers while avoiding data bias since one particular segment of young farmers could be featured more than others, or been missed. Achieving a fair balance in the range of responses, when possible, entailed the inclusion of participants depending on their gender, age, on whether they are registered as full-time, part-time farmers or non-registered, on the type of production in which they are involved and on whether they accessed EU funds at any time prior to this study.

Achieving overall balance amongst possible respondents was aimed for before contacting the young farmers. Obtaining data according to the criteria mentioned above, allowed for better targeting in terms of data collection. Including young farmers working under different conditions and circumstances is important for the purpose of this research to be able to generate a clear visual of how these young farmers are living and operating.

The convergent design (Creswell & Clark, 2017) used in this study entailed the collection and analysis of qualitative and quantitative data simultaneously obtained from one questionnaire, yielding a single set of results. Previously referred to as concurrent or parallel design, the convergent design, enables the comparison and combination of results obtained from the investigation.

Inductive content analysis was carried out through systematic reading of a sample set of questionnaires, gradually establishing categories and numerical codes to be used for subsequent analysis of all materials (Martin & Hanington, 2012). All possible qualitative responses were identified and grouped under common themes, with a unique number allocated to each sub-theme. Such string-to-numerical conversions were crucial to be able to calculate the data scientifically.

2.2 Data analysis

Once all the data was inputted into the database, it was transferred into the IBM SPSS Statistics 27 software to allow a detailed analysis within specific parameters. This software platform, which offers advanced statistical analysis tools, allowed for different variables to be compared and combined in order to project the various trends and characteristics of the young farmers from whom data was collected.

The Chi Square test was used to determine possible associations between two categorical variables. According to Singhal and Kumar (2015) categorical data may be analysed through the Chi-square test which is a nonparametric test used to test the hypothesis of no association between two or more groups, population or criteria, and to test how likely the observed distribution of data corresponds with the expected distribution (ibid.).

3 Results and Discussion

3.1 Data collection methods

In this current study, the emerging traits of participants offer a glimpse of the key qualities that distinguish young farmers in Malta and Gozo. Due to the meticulous selection process previously outlined, these aspects are thought to be representative. The characteristics of such young farmers were assessed via a questionnaire that provided information on their lifestyle and their opinion on the opportunities and challenges they currently face.

During the data collection process, it was ensured that respondents felt comfortable in expressing themselves in colloquial language. Very often, a healthy discussion yielded more challenges and opportunities to be voiced and recorded on the questionnaire template. Although time consuming, the lengthy one-to-one meetings to obtain responses resulted in a large quantity of relevant information. There were very few instances when respondents did not provide any feedback. Most respondents provided multiple responses and tackled aspects which could be further analysed into categories.

Out of 202 questionnaires, 82.2% were collected during one-to-one meetings. The other 15.3% and 2.5% were collected via the ordinary postal system and via electronic mail, respectively. During this study it was found that the setting up of physical meetings, preferably on the farm,

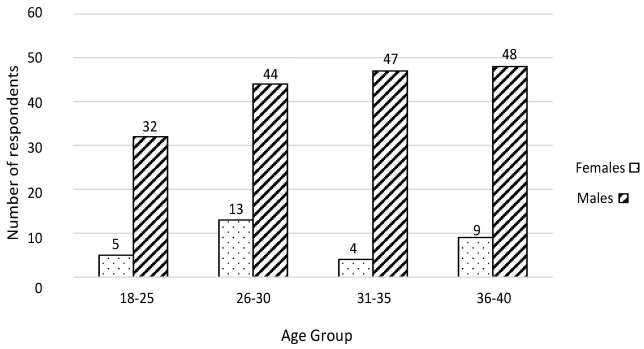

Figure 1: The distribution of the 202 male and female respondents by age group.

Region	Frequency	Percentage
Malta North	127	62.9 %
Malta South	51	25.2 %
Gozo	24	11.9 %

Table 2: The distribution of 202 respondents (18-40 years old) by region in Malta and Gozo as a sample of the 1239 young farmers in 2020.

gave young farmers flexibility and encouraged better expression of feelings and thoughts, rather than the other collection methods. However, a professional work ethic was maintained throughout data collection while keeping conversations in a colloquial form.

3.2 Characteristics of respondents

The population and structure of the farming population has been debated as one of the most worrying salient points for future reference. National statistics show that the farming population in Malta is ageing, and fewer young farmers are joining the workforce (ACS, 2018; EMCS Ltd, 2021; EC, 2020).

Considering the criteria mentioned in the previous section, gender and age provided the basis of the type of young farmers who participated in this study. Out of the 202 respondents, 171 were males and only 31 were females. This has been achieved notwithstanding the efforts made to recruit more female young farmers. Additionally, the majority within the female category (58.1%) are non-registered which may well equate to non-remuneration. Figure 1 represents the distribution of male and female respondents by age group. This relates to recent results emerging in the thematic evaluation report about sub-measure 6.1 implemented in Malta, which states that around 82% of the beneficiaries are male while 18% are female (EMCS Ltd, 2021). Statistics available also indicate that 92% of farm holders are male while 7.9% are female (EC, 2021). The share of female young farmers is among the lowest in the EU (EC, 2020). Females in Malta are still generally associated with household duties and the rearing of children even though they might have a full-time or part-time job (Aquilina, 2015; European Institute of Gender Equality [EIGE], 2023).

The population and structure of the farming population has been debated as one of the most worrying salient points for future reference. National statistics show that the farming population in Malta is ageing, and fewer young farmers are joining the workforce (ACS, 2018; EMCS Ltd, 2021; EC, 2020). Regardless of gender, various instances were encountered throughout this research and previously through work experience when established farmers might not consider their children as workers, but simply pro bona helpers. This may be associated with the reluctance of older farmers to retire, which has been identified as one of the obstacles by 42% of beneficiaries of sub-measure 6.1 (EMCS Ltd, 2021). Four different age groups were categorised considering the age range between 18 and 40 years. During data collection, it was deemed necessary to include young farmers having different ages to obtain a balanced sample regarding their age group. In fact, a minimum of 37 responses from the 18-25 years age group and a maximum of 57 young farmers falling in the age group of 36 to 40 years were obtained. The largest number of males (48) were found in the 36-40 age group, whereas the largest number of females (13) belongs to the 26-30 age group. It is a known fact within local rural communities that parents encourage their children to further their studies to access a job within another sector and with less hardship (ACS, 2018). Nonetheless, this research provided opportunity to encounter young farmers who chose to work in agriculture despite their parents discouraging them, because they consider such work as a way of life.

Table 2 indicates that most of the respondents live in the north-western part of Malta (62%), followed by 25% located in the south-eastern part of Malta and 11.9% in Gozo. This concurs with the geographical distribution of farmland and fields which are mainly prominent in the north-western region of the island of Malta. This grouping was adopted following the composition of Local Action Groups formed according to the LEADER approach of the Rural Development Policy (MEAE, 2023)

Another important characteristic of these young farmers is their job status. This study reveals that most participants are registered full-timers (42.1%), 25.7% are part-timers, and 32.2% are non-registered. Through this study, it was revealed that job status is, to some extent, an age-related factor. The largest share of non-registered young farmers (48.6%) is within the 18-25 age bracket.

In which main sector are you involved?		
Main sector	Frequency	Percentage
Fruits and vegetables	65	32.2 %
Dairy/Beef cattle	47	23.3 %
Sheep and goats	13	6.4 %
Gardening/Landscaping	10	5.0 %
Swine	9	4.5 %
Beekeeping	8	4.0 %
Olive cultivation	7	3.5 %
Subsistence Farming	7	3.5 %
Broilers	5	2.5 %
Floriculture	4	2.0 %
Rubble wall restoration	4	2.0 %
Rabbitry	3	1.5 %
Ploughing/Harvesting	3	1.5 %
Egg layers	3	1.5 %
Arboriculture	3	1.5 %
Viticulture	2	1.0 %
Organic Farming	2	1.0 %
Hydroponics	2	1.0 %
Ornamentals	2	1.0 %
Micro greens	1	0.5 %
Nursery management	1	0.5 %
Processing	1	0.5 %

Table 3: The distribution of 202 respondents (18-40 years old) by region in Malta and Gozo as a sample of the 1239 young farmers in 2020.

	Count	Percentage
Improved marketing	33	17.4 %
Increase the demand for local products	32	16.8 %
EU funding	32	16.8 %
Increased awareness about local food systems	31	16.3 %
Direct sales	28	14.7 %
Demand for local and fresh produce increased	26	13.7 %
Diversification	26	13.7 %
Doing a job/hobby you love/like	25	13.2 %
Developments of niche products	24	12.6 %
Training opportunities	24	12.6 %

Table 4: The ten most common opportunities within the agricultural sector identified by young farmers replying to the questionnaire.

In other age-brackets analysed, especially that of the 26-30 age bracket, non-registered work is considerably high when compared to registered employment. In such situations, these participants are involved in another gainful employment and help around with their parent's farm business 'after office hours'. The term 'part-timer' is not equate to the number of working hours. A good number (30.8%) of part-timers participating in this research work between 21 and 40 hours per week, and another 30.8% of part-timers work 41 to 80 hours a week, thus working more than the regular 40-hour week associated with a full-time job. Therefore, a part-timer could be more committed than one would think, by spending a substantial number of hours working on a farm.

Generally, young farmers are involved in one or more sectors. However, these are mainly engaged in one of the following sectors: fruit and vegetable sector (53.5%), followed by the dairy and beef sector (28.2%) and subsistence farming (21.3%), amongst others. Since multiple responses were collected regarding sectors in which the respondents are involved, further analysis was carried out to identify which are the primary and most important sectors in which the young farmers operate. Table 3 illustrates the main sectors in which the 202 respondents were involved at the time. In spite of this fine-tuning, the fruits and vegetable sector remains the most prominent (65 young farmers), followed by the dairy and beef cattle sector (47 young farmers). Overall, young farmers mentioned twenty-two different sectors. This goes in accordance with the National Agricultural Policy 2018-2028, which states that the production of fruits and vegetables and dairy milk are the two major sectors. There is a significant correlation between the main sector and the employment status of these young farmers. 44.6% of young farmers in the fruit and vegetable sector and 72.30% of young farmers in the dairy sector, are full-timers. Today young farmers are also diversifying in their services, such as landscaping and rubble wall restoration. The increase in urbanisation has also created a need for more landscaping services in dwellings located in urban areas (ACS, 2018). Additionally, the increase in demand for skilled persons who can restore and build traditional rubble walls is due to EU funding available for non-productive investments (EU Funding, 2018), but also due to the increase in road works and new dwellings being constructed all over the islands (Zerafa, 2020).

The respondents were further categorised by farm type. The largest number of respondents (50.5%) carry out activities related to horticulture, while 40.1% carry out work on livestock farms. A fraction of young farmers (9.4%) work on mixed farms, meaning that they grow crops as well as rear livestock.

3.3 Opportunities

Respondents were asked to identify opportunities in an open-ended question. The variety of opportunity have been recorded and analysed. The respondents ($n = 202$) mentioned a total of 774 opportunities. The ten most

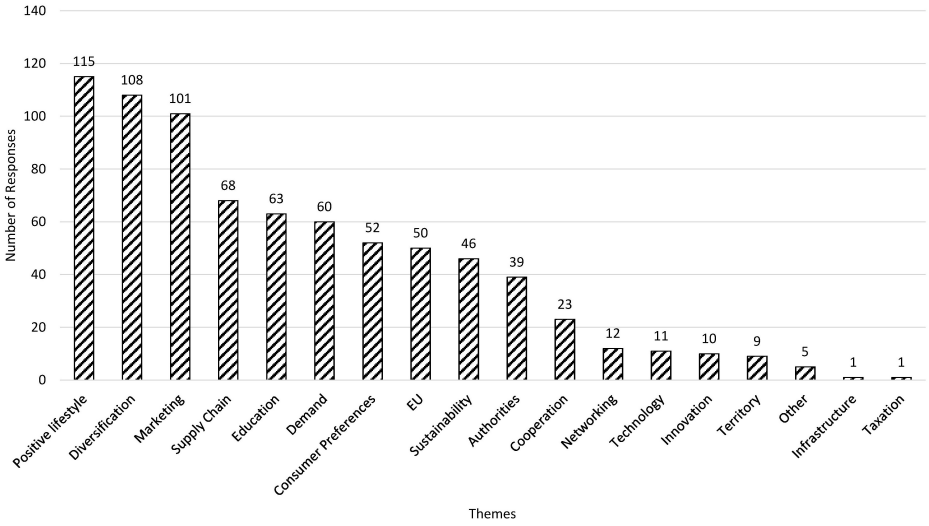

Figure 2: The themes and their respective responses for the opportunities expressed by the young farmers.

common opportunities identified by the young farmers, are listed in Table 4, having 'improved marketing' as the most frequently mentioned (17.4%), together with the 'increased demand for local products' (16.8%) and 'EU funding' (16.8%).

Subsequently, all the opportunities mentioned have been further categorised into themes ($n = 18$). Figure 2 shows the themes and their respective responses. Opportunities which fall into the theme of positive lifestyle associated with farming (14.86%) has been deemed the most important for young farmers, followed by diversification (13.95%) and marketing (13.05%). Recent opinion pieces about local agriculture often depict the sector as a dying one with little hope and possibilities to revive the workforce (Carabott, 2017; Depares, 2019). Young farmers responded wholeheartedly about what opportunities exist giving a clear message about what needs to be done for their work and local agriculture to improve. Most of the issues mentioned are listed in the National Agricultural Policy 2018 – 2028 (ACS, 2018). Improved marketing, for instance, remains one of the most crucial needs when selling agricultural produce (EC, 2020). This need has for long been highlighted (Stockdale, 1934), however necessary action throughout the years seems to be lacking. Most locally produced horticultural and meat products lack sufficient grading, packaging, and branding. This made it increasingly difficult for consumers to identify and choose local products, making way to possible food fraud from happening at the point of sale. Cachia (2015) examines the rationale behind food fraud as a criminal offense suggesting that specific food fraud legislation is necessary.

Funds for processing and marketing have been made available since Malta's accession to the EU (Rural Development Department, 2004), but small producers have found it difficult to implement proper marketing actions due to limited packaging and labelling. Economies of scale (Duffy, 2009) may discourage the use of machinery, but being part of a co-operative or producer organisation can help overcome this barrier (EC, 2020). Costs related to compliance of standardised systems and quality labels can be spread amongst producers by reducing individual initial investments (Meybeck & Redfern, 2014).

Marketing aspects need to be improved at farm and national level (ACS, 2018). This proved to be effective in other countries (Gregoric et al., 2018; Pujara, 2016). Young farmers are using branding and online methods, particularly social media platforms, to market their produce directly to consumers and retail outlets. This was one of the lessons learned through the COVID-19 pandemic situation. Direct sales (14.7%) are identified as an opportunity, and respondents were satisfied with the response obtained through social media.

Two young farmers switched from part-time to full-time farming due to the potential profits gained. Another young farmer started producing niche products from a small patch of land owned by a family member. Marketing can greatly improve the sales of produce and is a real opportunity to tap into when products are produced according to market demands. In parallel to the marketing aspect, a good number of young farmers feel that the need to increase the demand for local products is on the rise (16.8% of cases). The drive from consumers to purchase local products is probably due to several reasons, such as value, freshness, and taste.

Over recent years, there have been several marketing

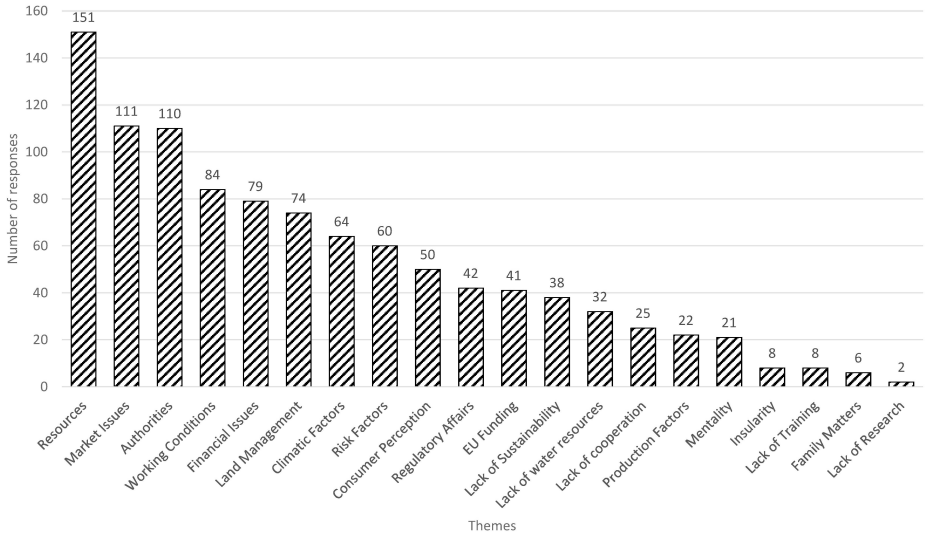

Figure 3: The themes and their respective responses for the challenges expressed by the young farmers.

campaigns, including those driven by individual farmers, authorities, and NGOs (Parliamentary secretariat for the EU Presidency and EU funds, 2015). Young farmers feel that knowledge about how they produce food needs to be conveyed on to consumers, and this can be achieved through marketing. The EU funded "Investments in agricultural holdings" measure (Managing Authority, Parliamentary Secretary for European Funds and Social Dialogue, 2018), has always been popular amongst farmers, ranking 'funding' at 16.8% in the opportunities list identified by respondents. Other opportunities identified in relation to production were diversification and development of value-added niche products (Malta Profile, 2017). Diversification can happen both in terms of goods and services provided, and success stories of local farmers who diversified their offerings need to be promoted to set a positive example to others.

Research can only be achieved through research to develop new products (da Silva et al., 2009). This research could be supported by academic and vocational educational institutions who can provide the theoretical background necessary to create new products (European Centre for the Development of Vocational Training [CEDEFOP], 2020). Young farmers identified training as an opportunity (12.6%), likely because they value the positive outcomes that may emerge from further education. Projects supporting training and research involving young farmers could create further opportunities giving more scope for the future generation of farmers in Malta. Despite claims about farming as a dwindling profession, young farmers are showing interest in improving the current situation.

As stated earlier, Improved marketing has been deemed to be the most important opportunity (17.4%). For this reason, it is being acknowledged that sales and marketing are important aspects for young farmers, which have been studied further as per Table 5.

Sales and marketing methods have been studied in terms of how produce is marketed and sold, be it directly, through the middlemen or both. Six respondents claimed that they did not sell any of their produce thus meaning they can be classified as subsistence farmers. The Chi Square test was used to investigate the association between two categorical variables. The null hypothesis specifies that there is no association between the two categorical variables and is accepted if the p-value exceeds the 0.05 level of significance. The alternative hypothesis specifies that there is a significant relationship between the two variables and is accepted if the p value is less than the 0.05 criterion.

Results in Table 5 show that 43.1% of the respondents do not market and sell their own produce thus depending entirely on the middlemen, while 25.2% market and sell between 76 and 100% of their produce. The percentage of direct sales by those who sell directly to consumers is significant. Since the p-value ($p < 0.001$) is much lower than our chosen significance level (0.05), we conclude that there is a strong association between the percentage of direct sales and the way young farmers market their goods and services ($\chi^2(12) = 280.82, p < 0.001$).

3.4 Challenges

Challenges identified by respondents have addressed an open-ended question in the questionnaire. A total of 1028 responses have been collected from 202 young farmers. All the different challenges highlighted have been listed

How do you sell and market your own products/services?							
			Direct Sales	Middlemen	Both	No Sales	Totals
What percentage of goods/services do you sell directly to the end customer?	0 %	Count	0	81	0	6	87
		Percentage	0.0 %	98.8 %	0.0 %	100.0 %	43.1 %
	1-25 %	Count	2	1	31	0	34
		Percentage	5.6 %	1.2 %	39.7 %	0.0 %	16.8 %
	26-50 %	Count	1	0	19	0	20
		Percentage	2.8 %	0.0 %	24.4 %	0.0 %	9.9 %
	51-75 %	Count	0	0	10	0	10
		Percentage	0.0 %	0.0 %	12.8 %	0.0 %	5.0 %
	76-100 %	Count	33	0	18	0	51
		Percentage	91.7 %	0.0 %	23.1 %	0.0 %	25.2 %
Total		Count	36	82	78	6	202
		Percentage	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

Table 5: Different sales channels in relation to direct sales (as a percentage) to the end user. $\chi^2(12) = 280.82$, $p < 0.001$

and analysed. A list of the ten most mentioned challenges have been included in Table 6. Among these ten most popular challenges are the harsh competition that exists (7.30%), the costs of production (5.40%), and climatic factors (5.20%) Subsequently, the different challenges were organised into catagorised themes ($n = 20$). Resources (14.69%), market issues (10.80%) and authorities (10.70%) are the three most common themes.

The insular nature of the Maltese Islands poses significant challenges to all farmers, as competition from producers outside Malta is a real threat (ACS, 2018; MEAE, 2023). Since Malta became a member of the EU, trade barriers have been removed, making it advantageous to local sellers. Additionally, bilateral agreements with the EU enabled third countries[1] to trade with Member States (Hervé, 2020). Local consumers are still price conscious due to the low minimum wage. Policy makers argue that Maltese farmers need to focus on adding value and focusing on niche products rather than competing on price (ACS, 2018; EC, 2020). The purchasing of agricultural products from outside Malta is a reality that cannot be changed due to the free trade policy of the EU (EC, 2024).

Transport costs associated with agricultural inputs and lack of bargaining power from individual farmers result in a significant increase in prices. Although 45.3% of the utilised agricultural land in Malta is dedicated to fodder crop cultivation, Malta is still dependent on high quantities of imported feeds. The European Commission (2020) has suggested exploring the cultivation of protein and fodder crops. The National Agricultural Policy 2018-2028 suggests further experimentation of crops such as alfalfa, vetches, maize, corn, and sorghum. Young farmers are caught in a situation where it is easier to bring over produce to Malta and difficult to sell produce abroad due to the large quantities available and competitive prices.

Additionally, this is due to the conservative mentality of older farmers (ACS, 2018). The lack of resources as a challenge is the most common theme identified in published reports describing the current situation of agriculture in Malta. The lack of basic resources such as land or buildings, in the case of livestock farms, is a major challenge for young farmers (ACS, 2018; EC, 2020). These challenges include high costs and lack of availability of agricultural inputs, as well as lack of trained personnel and professional services. The strong opinion of young farmers regarding the lack of resources concurs with statements in academic literature and official reports about the role of agriculture in the Maltese Islands (Attard, 2009).

In the livestock sector, the lack of veterinarians working with farm animals is a concern expressed by many farmers. This issue has been flagged in a DG SANTE report (EC, 2020) and Debono (2009) in a newspaper article. Young livestock farmers have alleged that they have to deal with complicated births and illnesses on their own due to lack of veterinary support, resources, and professional personnel. Local farms are managed by families with limited financial resources (ACS, 2018), and farmers have resorted to hiring migrants to help in day-to-day duties on farms (Debono, 2009). However, migrants may leave Malta to join their families or seek better employment in other European countries.

Climatic factors are the third most common challenge identified by young farmers in Malta (Galdies, 2011). Long periods of drought and anomalies such as strong winds, hailstorms, and heat waves are affecting agriculture in a direct manner (European Environment Agency

[1] A "third country" refers to any country that is not a member of the European Union.

	Count	Percentage	Percentage of cases
Harsh competition	75	7.3 %	37.5 %
Costs of production	56	5.4 %	28.0 %
Climatic factors	53	5.2 %	26.5 %
Low profit margins	49	4.8 %	24.5 %
Pests and diseases	43	4.2 %	21.5 %
Work life balance is difficult	30	2.9 %	15.0 %
Beaurocracy	28	2.7 %	14.0 %
Lack of professional services	28	2.7 %	14.0 %
Limited resources available	27	2.6 %	13.5 %
Lack of assistance from authorties	26	2.5 %	13.0 %

Table 6: The ten most mentioned challenges by the 202 young respondents.

[EEA], 2023; Galdies & Galdies, 2016). Damages mentioned by young farmers include loss of livestock due to extreme heat temperatures, infestations caused by pests and diseases, and damage to farm structures such as greenhouses when strong winds prevail. The lack of resources, market issues, and authorities are the three most relevant themes identified by young farmers. The availability and cost of resources has been indirectly mentioned earlier, while the second most important theme related to market issues includes food fraud, harsh competition, and market volatility. These issues are widely acknowledged by policy makers (ACS, 2018) and the farming community alike.

Producers need to improve their standards in grading, packaging, and labelling to make local products easily identifiable by consumers (ACS, 2018; EC, 2020). Effective monitoring and enforcement from authorities is necessary to tackle the challenges mentioned. Farmers acknowledge that consumers may opt for local products if quality and price are advantageous, but their products do not stand out from the rest. This lack of traceability creates a risk of food fraud at sales point. The third most important theme regarding challenges is about local authorities, which include bureaucracy, lack of assistance, co-ordination and accountability, complicated and expensive permitting processes, as well as lack of political vision.

Data collected from young farmers showed that those who are pro-active within the sector are encountering a multitude of obstacles leading to time-wasting and unnecessary costs. The Planning Authority, the Environment and Resources Authority, and the Lands Department were mentioned multiple times by young farmers who vented their frustration regarding situations encountered during the permitting process and land transfer issues. EU funding applications and paperwork involved during the implementation of investment projects were also mentioned as matters discouraging farmers from applying again (EMCS Ltd, 2021). The National Agricultural Policy 2018-2028 refers to the need to reduce bureaucracy and implementation costs, but few references are made to this issue in other official and academic texts. Bezzina et al. (2017) outlines that bureaucracy has become a 'buzz word' and that such perception is weakening the good work done by public administration.

Local NGOs have raised their concerns about bureaucracy and various organisations taking a leading role as farmer representatives have called for an increase in efficiency across all departments on which farmers are dependent (Carabott, 2021; Young Friends of the Earth, 2023). Initiatives that increase efficiency across all administrative sections would lead to win-win situations for policy makers and the operators. Adopting a target-oriented approach can improve the motivation of producers within the sector while maximising resource efficiency. The policy also envisages to reward genuine farmers through a point system for certain policy measures (ACS, 2018).

4 Conclusions

This study was based on a questionnaire that was aimed at encouraging young farmers to voice their ideas freely about their experiences on the current agricultural situation in Malta. Apart from the quantitative demographic information, which characterises this section of the population, information on challenges and opportunities, raised by young farmers, constituted the qualitative aspect of this study. The overwhelming volume of responses and the justifications offered indicated a great degree of interest among respondents. The three most significant theme opportunities include positive lifestyle, the need to diversify production and marketing, whereas the three most significant unconstructive themes were the availability and cost of resources, together with issues pertaining to the market and the authorities. This study sets a baseline to policy makers, funding agencies, farmers organisations and authorities to understand better the situation of young farmers and the future of agriculture in Malta.

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