

A Study of the Effect of Sub-contracting on Teagasc Advisors Perceptions of their Roles as Agricultural Extension Agents

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degree of Masters of Agricultural Science

By

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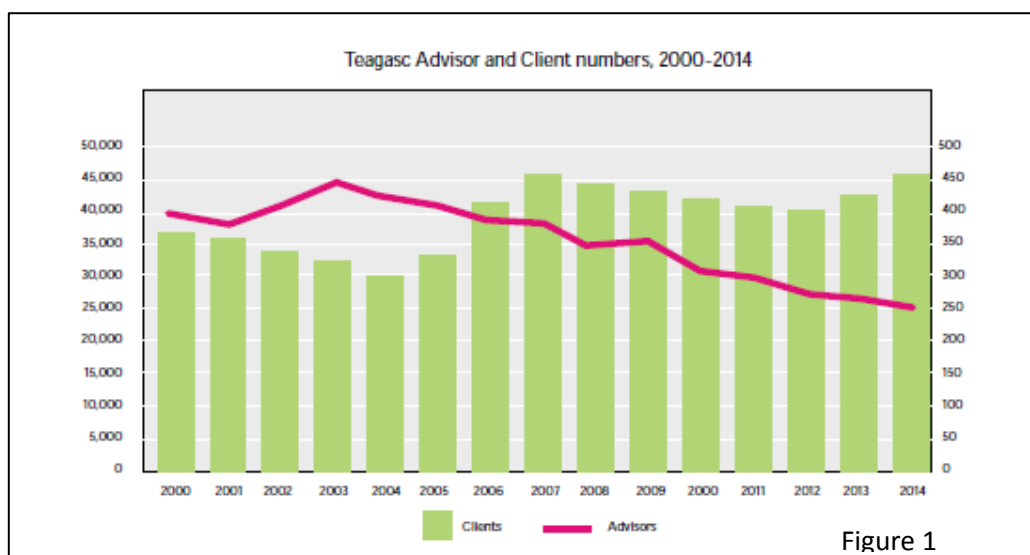
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Abstract:

Teagasc took a new approach to deal with an increasing work load with a limited amount of staff. They sub-contracted environmental scheme work to an external company to reduce the workload of the Teagasc advisory staff. This scheme work is seen by Teagasc to be non-core knowledge transfer work. With this work out sourced, Teagasc advisors could then focus on their core-knowledge transfer roles as agricultural extension agents. This study examines the advisors' definitions of their core and non-core knowledge transfer work. Furthermore it examines did the outsourcing of the advisors non-core knowledge transfer work help advisors spend more time on their defined core knowledge transfer roles.

Introduction:

Teagasc was established in 1988 as the national agency with the responsibility of providing research, training and advisory services to the Irish agricultural industry (Prager and Thomson, 2014). Since the semi-state body was set up, the staffing levels have fluctuated over the years. Over the last decade alone, the number of permanent advisors has gone from a peak of 422 advisors in 2007 to a low of 250 advisors in 2014 (Teagasc, 2015). Thus, the number of advisors has fallen by over 40% as seen in Figure 1. The number at the start of 2017 was 300. These fluctuations were mainly as a result of the economic downturn in 2008 which resulted in severe cuts to the public service budgets. Therefore, reducing the resources available to support the agricultural industry, an industry which is worth €26 billion per annum to the Irish economy (Department of Agriculture, Food and the Marine (DAFM), 2017). The importance of having a strong advisory service to deal with the demands of changing technologies of production, legislation, environmental processes, and policy issues is highlighted by Ingram (2008). Without this advisory support, rural Ireland in particular would face serious economic consequences. Knuth and Knierim (2013) emphasized the importance of innovation generation, knowledge dissemination and on-going learning in rural areas, and agricultural extension systems are identified as the important partner in providing this.



Strategic Pathways for the Teagasc Agricultural Advisory Service 2015-2020.

The delivery of advisory services has changed around the world from the direct delivery of advisory services through Ministries of Agriculture, to more diverse models of public / private, commercial and Non-Governmental Organisations (NGO's) delivery. The advisory service in Ireland is a semi-state body. Farm advisory services are only one component within the larger Agricultural Knowledge and Innovation System (AKIS). AKIS is described as the exchange of knowledge and supporting services between diverse actors from the first, second or third sector in rural areas (Prager *et al.*, 2017). Ireland is unique in having a substantial component of its AKIS within a single organisation, Teagasc. Teagasc activities are accompanied by work from private agricultural consultants / veterinarians, private research entities, universities / Institutes of Technology, DAFM, government departments, various public agencies and numerous other actors (Prager and Thomson, 2014). Hermans *et al.* (2012) highlights the importance of all the stakeholders within the Irish AKIS system to come to shared visions, well-established linkages and information flowing amongst different public and private actors, conducive incentives that enhance cooperation, adequate market, legislative and policy environments.

Teagasc advisors can be identified as change agents. Change agents can be described as an actor within the agricultural community who directly or indirectly effects change through knowledge transfer or through a facilitating role. The change agent is seeking to drive innovation on behalf of the change agency i.e. Teagasc (Markham *et al.*, 2006). Trust plays a very important part in the advisor's role as a change agent. The capability to develop trust is the essence of all business advising roles (Johnson *et al.*, 2006). Trust is a fragile human feeling especially as the party seeking knowledge and information by the nature of the process can make themselves and their business vulnerable to others (Manning *et al.*, 2013). They rely deeply on 'honest brokers' who are mostly fee for service consultants and have no pecuniary interest such as Teagasc (Ingram, 2008). Therefore, advisors need to be confident in the knowledge that they are exchanging, so not to damage this fragile relationship.

The introduction of fees for Teagasc clients alienated some farmers and to an extent favoured the more commercial farmers who had a greater ability to pay. However, with the onset of direct payments, subsidies and other EU payments, the increased necessity for 'form filling' meant small scale farmers still needed the help of the advisory service, to apply for these payments. This forced the advisory service increasingly into a 'paper enterprise' (McDonagh *et al.*, 2013). Phelan (1998) argues that an increased focus on income generation, coupled with an augmented demand from the farming community to obtain direct payments, focused

advisors attention more on getting their clients direct payments from the EU, rather than focusing on farm development extension (McDonagh *et al.*, 2013).

Teagasc advisors are coming under increased pressure to take on a broadened mandate, with two agendas equally important: on-farm development with farmers and rural development (direct payments). To successfully support both agendas, the delivery methods and approaches of extension services need to make changes over time (McDonagh *et al.*, 2013). Teagasc' change to cope with this pressure was to outsource the non-core knowledge transfer work (direct payments) and let the Teagasc advisors focus on the farm development.

In Ireland, there are two main roles played by advisory services as outlined by Tom Kelly (Teagasc, 2013). These include; (i) development function and (ii) a service function (See Figure 2 below). The service function is seen as the provision of private goods, whether it is legal advocacy or meeting the requirements of reward schemes and as such, the service function is a lot clearer in terms of deliverables and is easier to charge clients for. This work is usually completed in a short time frame and the results are tangible unlike the development function roles. The development role is a more long term interaction and is less transparent in terms of clear outcomes. The development function is closely related to Teagasc advisors' core-knowledge transfer roles. These core-knowledge transfer roles are hard to define but are closely related to on-farm development with farmer clients.

Irish Agricultural Advisory Service and Development Function Matrix (Teagasc, 2013)	
1. One extreme here is private goods. These services command full fees for professional input. The fees for these services will be recouped by the individual through the outcome of the work; e.g. accountancy services, veterinary and agro-chemical prescriptions, legal advocacy, estate agency work.	
2. Less extreme private goods are the delivery of services, which although delivering private benefits to an individual, also provide wider benefits for the economy, the environment and society generally; e.g. environmental reward schemes, cross compliance advice and advisory support services.	
3. Less extreme public goods are the promotion of new technologies and systems through one to one contact where the benefit is small or not easy to demonstrate to an individual. However, wide spread adoption brings significant economic, environmental and society benefits to the public; e.g. support for EU schemes, carbon mitigation, water quality, alleviation of farm financial difficulty.	
4. More extreme public goods are the services made available to the target audience in groups, through open access platforms where participants can benefit from the information and knowledge; e.g. farm occupational health and safety, biodiversity advice, general public awareness.	

Figure 2

Teagasc over the years has provided the combination of service and development roles as shown in sections 2, 3 and 4 in Figure 2 above. Private organisations and consultants have mainly been involved in the provision of the service functions 1 and 2. For Teagasc, the reduction in staff numbers has put pressure on its advisors to provide all these roles, leading to a tension between the roles. Delivery of the service functions while protecting the core knowledge transfer / farm development function is a challenge. The options for addressing this challenge were highlighted at the 2013 KT Conference and are shown in Figure 3 below (Teagasc, 2013).

Options for the Future (Teagasc, 2013).	
<p>1. Do nothing. This option will see a further decline in Teagasc advisory staff numbers in the next three years with some areas and programmes being neglected or abandoned.</p> <p><u>Disadvantages:</u></p> <ul style="list-style-type: none"> • Quality of service issues, increased workload • Reputational damage to Teagasc; lack of confidence in research • No guarantee that private consultants will pick up this work. 	
<p>2. Differentiate the work. Teagasc advisers stepping back from one to one delivery and leaving this to the open market.</p> <p><u>Advantages:</u></p> <ul style="list-style-type: none"> • More advisory time to focus on productivity/ public goods <p><u>Disadvantages:</u></p> <ul style="list-style-type: none"> • The most lucrative client/work would be cherry picked. • The client/adviser relationship which exists with Teagasc would erode and could not be leveraged for developmental work. • The holistic programmatic approach which is facilitated by Teagasc would weaken • Current cost recovery ratios would reduce. 	
<p>3. Teagasc managing the delivery of programmes though a mixed model where some services are outsourced to, or delivered in partnership with, private consultants and commercial advisers.</p> <p><u>Advantages:</u></p> <ul style="list-style-type: none"> • Teagasc would manage and support the quality of programmes delivered. • Teagasc would manage the client relationship so that centralised services continue to be developed and provided to clients, e.g. newsletters, e-Profit Monitor etc. <p><u>Disadvantages:</u></p> <ul style="list-style-type: none"> • Clients would be poached for services based on relationship built up with sub contractors. • Teagasc carries the risk/cost of non-viable services. 	

Figure 3

Teagasc decided to go ahead with option 3. In 2015, Teagasc took a new approach with Farm Relief Services (FRS) to deliver planning services for its clients who wished to take part in the Green, Low-Carbon, Agri-Environmental Scheme (GLAS) and other associated schemes. This arrangement involved FRS providing 80 advisors and support staff in Teagasc offices to deliver GLAS planning services. In the Mayo region, the Teagasc and FRS partnership provided this GLAS planning service to 1,930 clients between 2015 and 2016 (Teagasc, 2017). Teagasc has highlighted in its 2015-2020 strategic plan that outsourcing is not suitable for core ‘knowledge transfer’ activities (Teagasc, 2015). Nonetheless, for sub-contracting to work effectively, especially in relation to implementation and quality control, a high level of administration and assistance from local advisors is required. The prime objective of the Teagasc advisory staff is to maintain the strong focus on the sustainable intensification of their client’s farms (i.e., ‘Knowledge Transfer’) while providing a scheme-support service to farmers in association with FRS who wish to avail of funded programmes in the Rural Development Programme 2015-2020.

It is consequently argued that governments have to remain responsible for ‘public good extension’ related to stimulating environmental protection structures and good farming practises (Rivera and Alex, 2004). Advisory services do not have the resources to promote farm development and promote environmental protection schemes; such is the case with Teagasc. A common way for the Government to do this is by contracting private advisors for special public good projects (Klerkx and Jansen, 2010).

Many governments are reluctant to renounce complete control of advisory organisations as they are still believed to be essential for the small to medium farmers unable to pay excessive fees for private extension services (McDonagh et al., 2013).

Another disadvantage that has been described as a result of the privatisation of advisory services is fragmentation (Kidd *et al.*, 2000). Fragmentation can result in conflicting information from different actors within the AKIS system. Feder *et al.* (2011) highlights the importance of the different players within a private advisory system working simultaneously to provide a non-fragmented advisory service. The public advisory system in the United Kingdom has been replaced by pluralist advisory services (Labarthe and Laurent, 2013). The advisory service has been described as a fragmented AKIS by some farmers (Prager *et al.*, 2017). This fragmentation consequently results in duplication among providers, confusion, information overload, gaps in provision, contradiction and even misinformation to farmers

(Sutherland *et al.*, 2013). The transition to a pluralistic advisory system and the commoditisation of knowledge has been blamed for the fragmentation of the system in which actors are not well-connected and there is information asymmetry (McDonagh *et al.*, 2013). Some farmers are finding it problematic as it is creating a misunderstanding among farmers about where to source credible information, as a result of unproductive competition amongst providers (Garforth *et al.*, 2003).

Prager *et al.* (2017) outlined that the characteristics of advisory services can be shaped directly and include: (i) governance structures, (ii) capacity, (iii) management, and (iv) advisory methods. Governance structures refer to the institutional options available for financing and providing advisory services, including the level of decentralisation and partnerships. Capacity refers to advisory staff, their training levels, client-advisor ratios, and infrastructure, while management includes the management style, monitoring and evaluation. Advisory methods include the number of clients, specificity of content, technologies used and orientation (target group). Looking at these characteristics defined by Prager *et al.*, (2017), the changes Teagasc has made can be associated with a change in governance structures. Teagasc has moved from providing all of their services internally, to outsourcing its non-core knowledge transfer work.

Teagasc appreciates its involvement in such schemes as frequently being the entry point for other core ‘knowledge transfer’ work, and enabling Teagasc to build on relationships between clients and advisors. Some scheme objectives over-reach into the core knowledge transfer role of the Teagasc advisors. When this happens, the advisors administer these parts of the schemes, for example, the discussion groups and farm improvement plans for the Knowledge Transfer Scheme launched in 2016 by the DAFM. A partnership arrangement is also considered to be the most effective way for Teagasc to maintain a strong relationship with its client base (Teagasc, 2015). This is why Teagasc still wants to be seen as providing the scheme service, so they can maintain and create new client relationships. This partnership with FRS is expected to free up more time for agricultural advisors to focus on their ‘knowledge transfer’ role within the organisation. MacConnell (2005) highlighted that Teagasc advisors’ clients are demanding more specialist advice, and therefore, the nature of the Irish agricultural advisor is changing.

Objectives of the study

The objectives of the study were:

- To explore the meaning of core knowledge transfer from different perspectives.
- To establish the advisor's perspective on their core-knowledge transfer role.
- To determine that out-sourcing has helped advisors focus on their identified core-knowledge transfer work.

Rational for the research

The reason for outsourcing the GLAS scheme work to FRS was to free up time for Teagasc advisors to focus more of their time on their core 'knowledge transfer' roles. However, little is known if the advisors feel it has achieved this objective. Since the partnership between FRS and Teagasc has only been in operation for a short period of time, there is very little study done on how it has impacted on the knowledge transfer process, especially from the advisors' perspectives. If this is the route Teagasc is taking to cope with the large demand placed on limited resources, research needs to be done on the area, to strengthen this area for future partnership projects and therefore, hopefully make a stronger advisory service. This study will bring to light how the introduction of sub-contracting of some of the advisor's non-core knowledge transfer work to FRS has impacted on the Teagasc advisors' perceptions of their roles as knowledge transfer agents.

Methodology

Study Area

Teagasc operates its agricultural advisory service in all counties of the Republic of Ireland. The advisory region of county Mayo was chosen for this study. It has one of the highest levels of farmer participation in the GLAS scheme in Ireland. Therefore, there was a high level of work that had to be completed through the Teagasc and FRS partnership. There are 10,890 farmers in the Mayo region (Central Statistics Office (CSO), 2010). Cattle production is the most popular type of farming enterprise, with 60% of the farmers specialising in cattle production systems. 18% specialise in sheep production systems, while only 3% specialise in dairy production (CSO, 2010). The average farm size in Mayo is 22.4 hectares (ha) (CSO, 2010). On average around the country, the average beef producer makes €157/ha while the

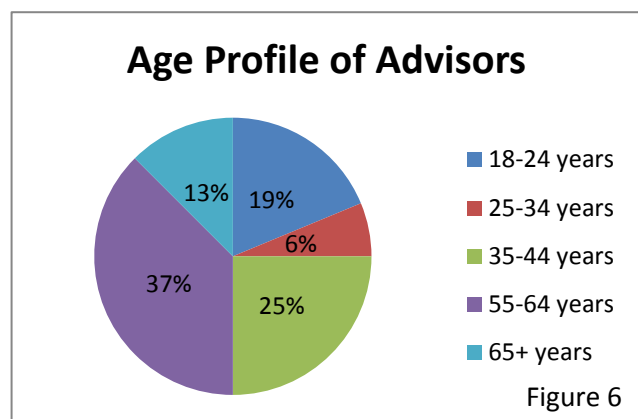
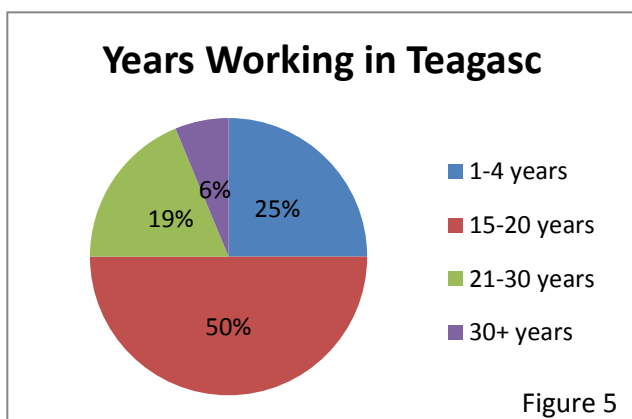
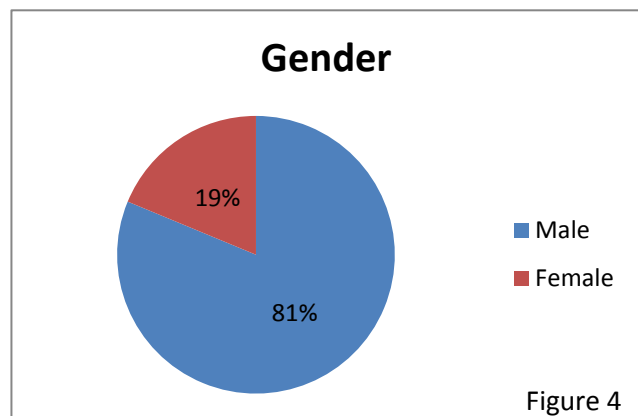
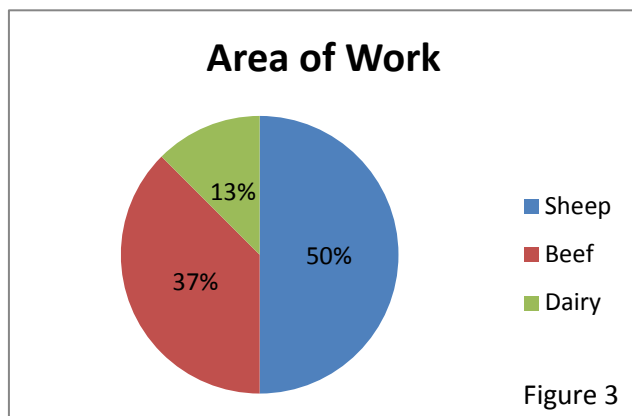
average sheep producer makes €135/ha (Teagasc, 2015). Taking the average farm size of 22.4 hectares with the average farm income around the country, the average sheep farmer and beef farmer makes €3,024 and €3,516 net profit respectively excluding subsidies. This low level of farm income from these enterprises in Mayo may indicate why there is such a high participation in the GLAS environmental scheme. There are seventeen full time advisory staff in the advisory region of Mayo, located in four different offices across the county; Ballinrobe, Claremorris, Ballina and Westport.

Sampling procedure and data collection

A total of seventeen advisors were selected for the study. All these advisors worked in partnership with FRS to implement the GLAS environmental scheme for the Teagasc clients in Mayo. Primary data was obtained from the advisors through an online questionnaire. Furthermore, secondary data was obtained from the Teagasc database that stores the amount of hours advisors spend at different areas of work each day of the year. Some of the questions in the survey coincided with the secondary data that had been gathered from the Teagasc database. This would help strengthen the findings of this study.

Personal characteristics of respondents

The total number of respondents to the survey was sixteen, including thirteen male advisors and three female advisors. Four advisors were young, aged under 34, while six were older than 55. The predominance of older advisors reflects the restriction of hiring of new staff during the recession. The majority of the respondents work primarily with clients who specialise in sheep production. Eight of the advisors specialise in sheep, two specialise in dairy and six specialise in beef. Eleven of the respondents have between 15 and 30 years of experience working as a Teagasc advisor, while another five have over 30 years of experience. Ten of the respondents have a client list of over 200 clients.



Study Findings

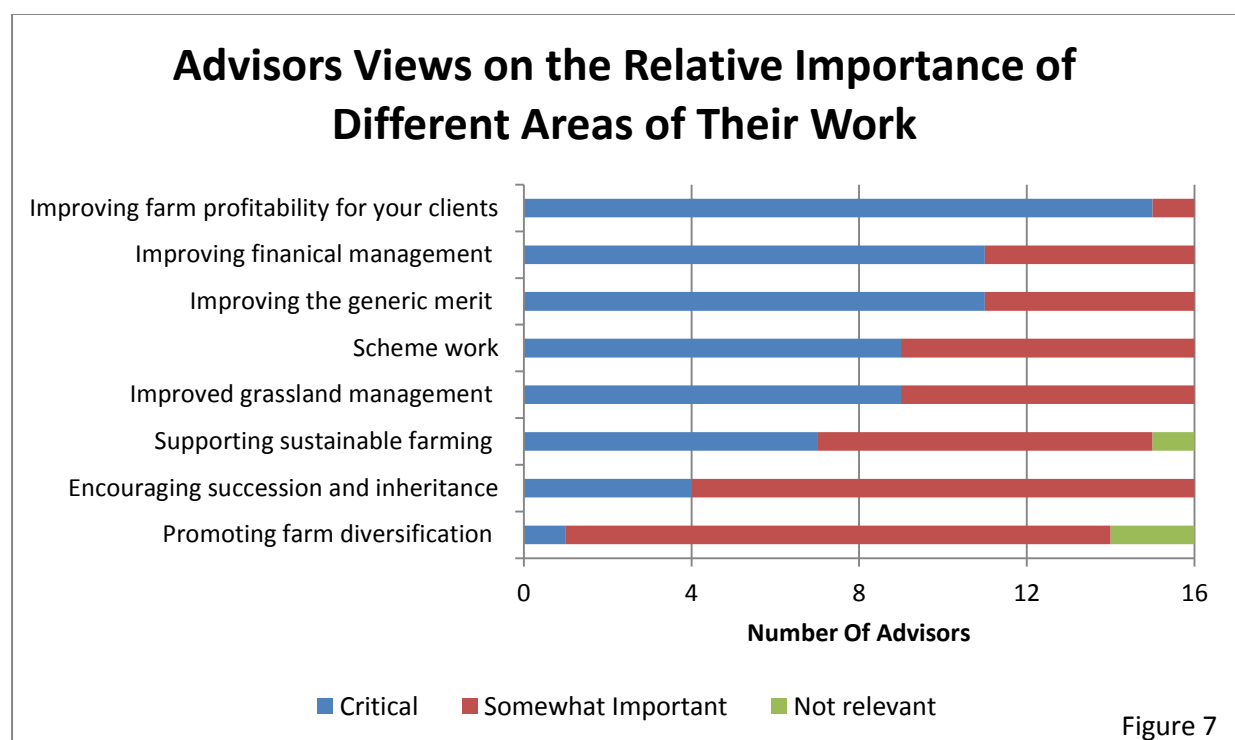
To study the effectiveness of the partnership between FRS and Teagasc from the perspective of the Mayo advisory staff, data had to be collected to see the situation both before and after the introduction of the partnership. The online survey that was sent to the advisors was designed to achieve both of these perspectives. Multiple questions were asked to get their opinions from both before and after the partnership. Furthermore, the questions were designed to triangulate information being gathered to strengthen the viability of the survey data.

Advisors were asked what their definition of core-knowledge transfer work was. The data for this was collected through qualitative methodology. The advisors were asked to give their definition of core-knowledge transfer work in a short sentence. In order to analyse the results, key phrases mentioned by the advisors were grouped together. Soon, a pattern started to emerge. Out of the sixteen respondents, thirteen advisors used the phrase of transferring knowledge to clients. Six of the advisors identified transferring knowledge to improve profitability, while three of the advisors commented that their core-knowledge transfer duty was to transfer new innovative ideas to farmers from research and demonstration farms. The method of knowledge transfer was also highlighted. Discussion groups, public events, on-farm visits and one-to-one consultations were all mentioned as methods of transferring the knowledge to their clients. No advisor mentioned completing scheme work applications as part of their core-knowledge transfer work. However, one advisor did mention transferring advice on best practise regards complying with DAFM regulations and schemes. In summary, looking at the responses, the advisors' general opinion is that core-knowledge transfer work is transferring knowledge such as new innovative ideas from research and other farms, to their clients, through different communication methods to improve their farm profitability.

The advisors were also asked to define, in their opinion, what their non-core knowledge transfer work is. Ten out of the sixteen advisors responded that scheme work such as single farm payment applications and GLAS scheme applications were examples of non-core knowledge transfer work. One advisor mentioned following up on non-paying clients and another advisor mentioned education courses. Even though the advisors selected scheme work as non-core knowledge transfer work, they still recognised that this played an important part in their clients farming enterprises because of the poor profitability associated with sheep and beef farming enterprises.

By breaking down the responses of the advisors for their definition of core knowledge transfer work, they believe that transferring knowledge such as innovative ideas to farmers in different methods such as discussion groups, one-to-one facilitation and open days to improve farm profitability, and as a result, provide a better income for their farming clients. The non-core knowledge transfer work was largely associated with scheme work applications and the administration of these schemes. However, advisors did point out that it was part of their core-knowledge transfer role to provide advice on best practise to comply with scheme regulations. Even though they saw the implementation of these schemes on farms as being non-core knowledge transfer work, they saw the importance of this income towards their farming clients, especially the beef and sheep farming sectors where incomes are low and volatile.

Advisors were given a list of different areas of work they are involved in on a day-to-day basis working as a Teagasc agricultural advisor. The advisors were asked to define these roles as either (i) critical core knowledge transfer roles, (ii) somewhat relevant or (iii) not relevant. After analysing the results, the role of improving farm profitability of their clients was voted as critical by fifteen out of the sixteen advisors surveyed. Only one advisor suggested it was somewhat important, while no advisor suggested it was not relevant. This role of improving farm profitability on farms was voted the most critical core-knowledge transfer role by the advisory staff. Improving grassland management, improving the generic merit on farms and improving financial management by farms were selected by 60% of the advisors as being a critical knowledge transfer role working as an agricultural advisor. Scheme work was categorised by 60% of advisors as a critical part of the role of a Teagasc advisor. Encouraging succession and inheritance and promoting farm diversification were voted the least relevant tasks associated with the role of a Teagasc advisor. These results are summarised in Figure 7 below. The blue line shows the number of advisors that selected certain areas as a critical part of being a Teagasc advisor, the red line shows the areas that were selected as somewhat relevant towards the role as a Teagasc advisor, while the green line shows the number of advisors which categorised certain areas of their work as not relevant.



The next series of Figures (Figures 8-15), have been generated from the survey data. The tables show the amount of time advisors spent at different areas of work both before and after the partnership with FRS. The advisors were asked to categorise the amount of time they spent at certain tasks during their working calendar before and after the partnership between Teagasc and FRS. The advisors were asked to categorise the amount of time they spent at certain areas of work as high, medium or low. In the Figures 1-4, the blue represents the amount of advisors that spent a high amount of time spent at certain areas, the red represents the amount of advisors that spent a medium time spent at different work areas, and the green represents the amount of advisors that spent a low amount of time at different areas of work.

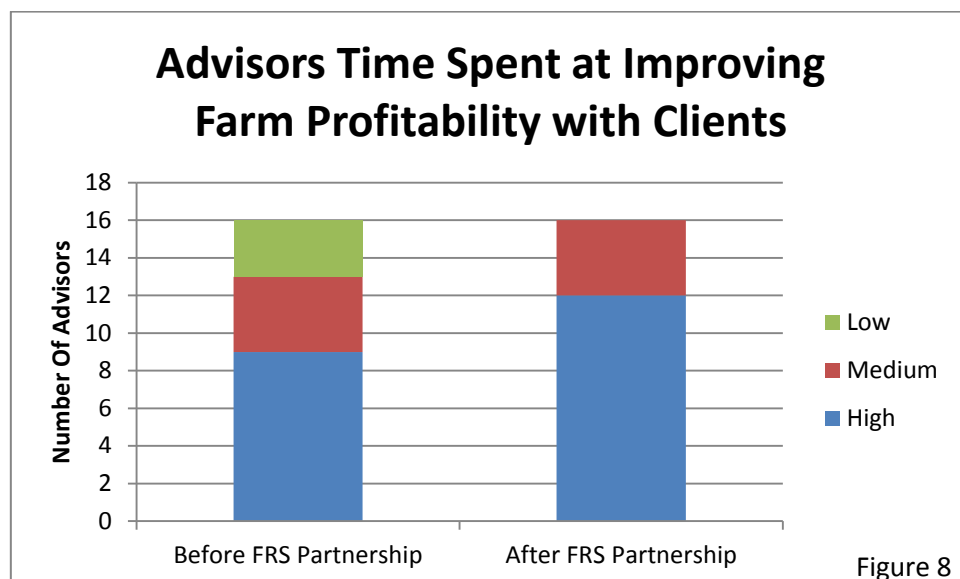


Figure 8 represents the change in time advisors spent trying to improve the profitability of their farming clients. Before the partnership with FRS, only nine advisors were spending a high amount of time at this and three advisors were spending a low amount of time at this area of work. However, after the partnership between Teagasc and FRS was introduced, twelve advisors were spending a high amount of time trying to improve farming profitability, four were spending a medium amount of time at this while no advisor was spending a low amount of time at this area of work.

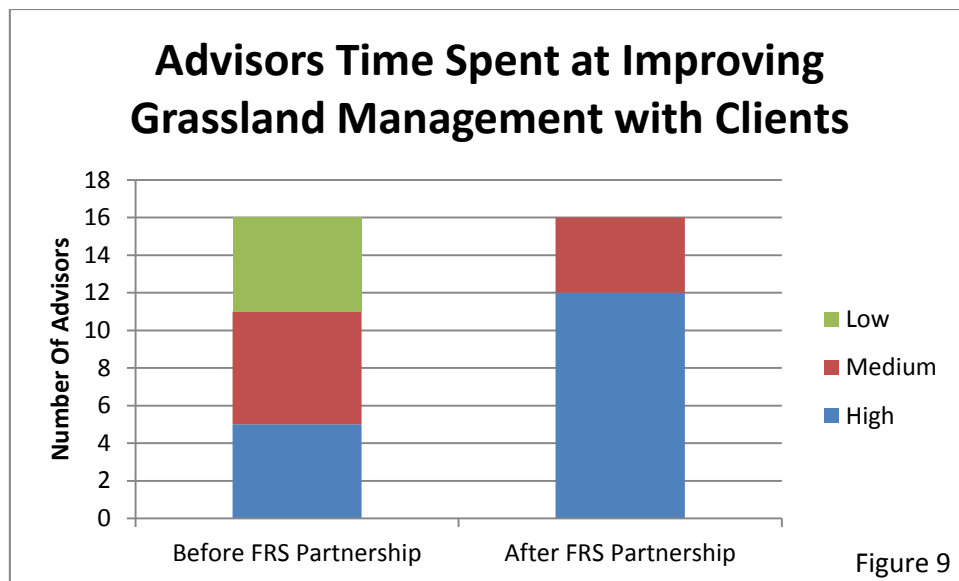
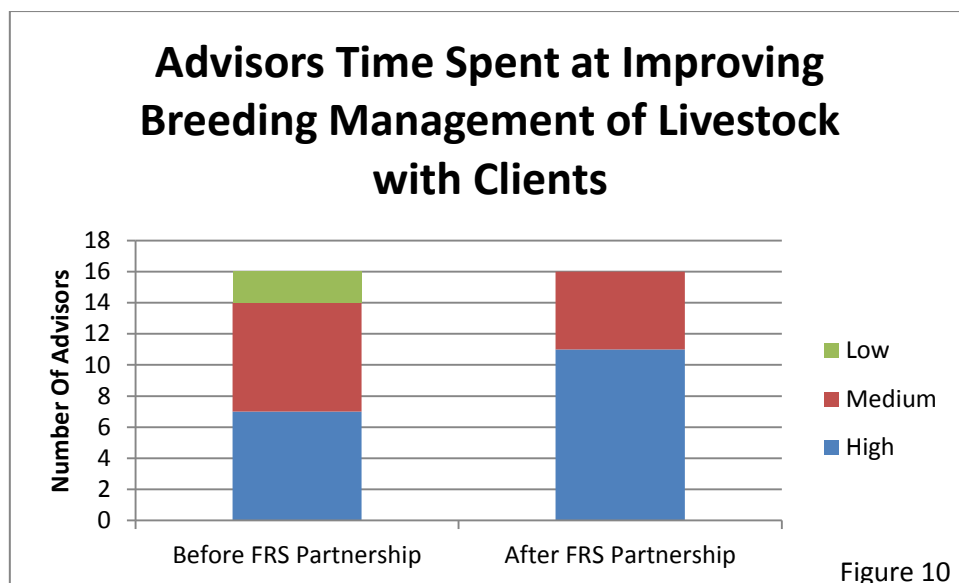


Figure 9 shows the amount of time advisors focused on the area of improving grassland management on their clients' farms before and after the partnership between Teagasc and FRS was introduced. Only five advisors were spending a high amount of time at this before the partnership, six were spending a medium amount of time, while five advisors were spending a low amount of time at this critical area. Nonetheless, after the partnership between FRS and Teagasc was introduced, the amount of advisors spending a high amount of time improving grassland management on their client's farm increased to twelve advisors. No advisor was spending a low amount of time at this area, while four advisors were spending a medium amount of time at the grassland management improvement.



In Figure 10, the pattern of change in time before and after the partnership between Teagasc and FRS is similar to that of Figure 9. Before the partnership between FRS and Teagasc only seven advisors were focusing a high proportion of their time on improving the breeding strategies on their clients' farms, another seven were spending a medium amount of time at this area, while two advisors were spending a low amount of time at this area. However, after the partnership between FRS and Teagasc the amount of advisors spending a high amount of their time at this area increased to eleven advisors, while five were spending a medium amount of time at improving breeding strategies, and no advisor was spending a low amount of time at this area of work.

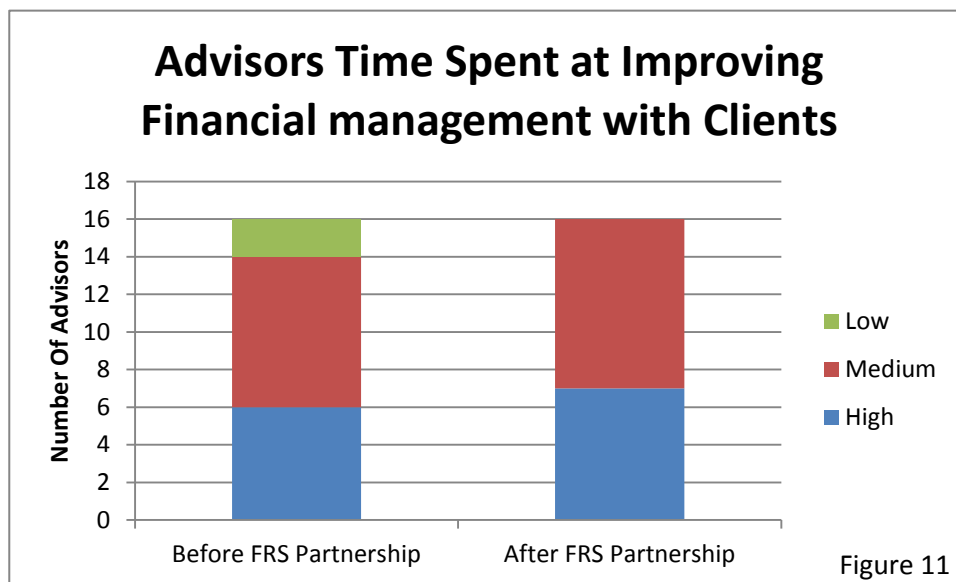


Figure 11 above shows the change in the amount of time advisors spent improving client's financial management skills. This is an extremely important aspect of any business. Before the partnership between Teagasc and FRS only six advisors were spending a high amount of time at this area. Furthermore, two advisors were spending a low amount of time at this area. However, after the introduction of the partnership, the number of advisors spending a high amount of time at this area increased from six to seven advisors. Also after the introduction of the partnership, there were no advisors spending a low amount of time at improving financial management with clients.

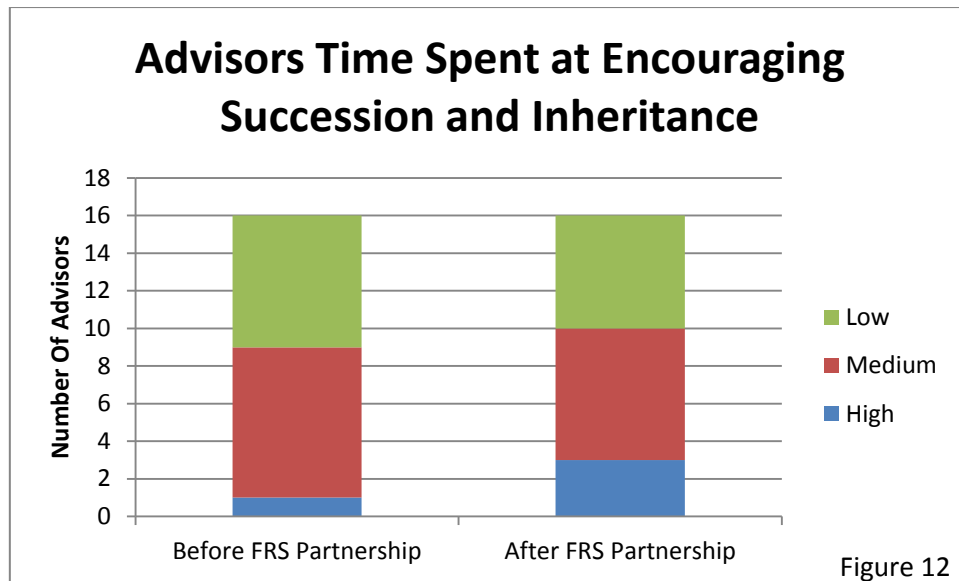


Figure 12 above shows the amount of time Teagasc advisors spent at succession and inheritance. Before the partnership with FRS only one advisor was spending a high amount of time at this area, eight were spending a medium amount of time while seven advisors were spending a low amount of time at this area of work. However, after the partnership formation three advisors showed they were spending a high amount of time at the area, seven were spending a medium amount of time while the amount spending a low amount of time decreased to six advisors.

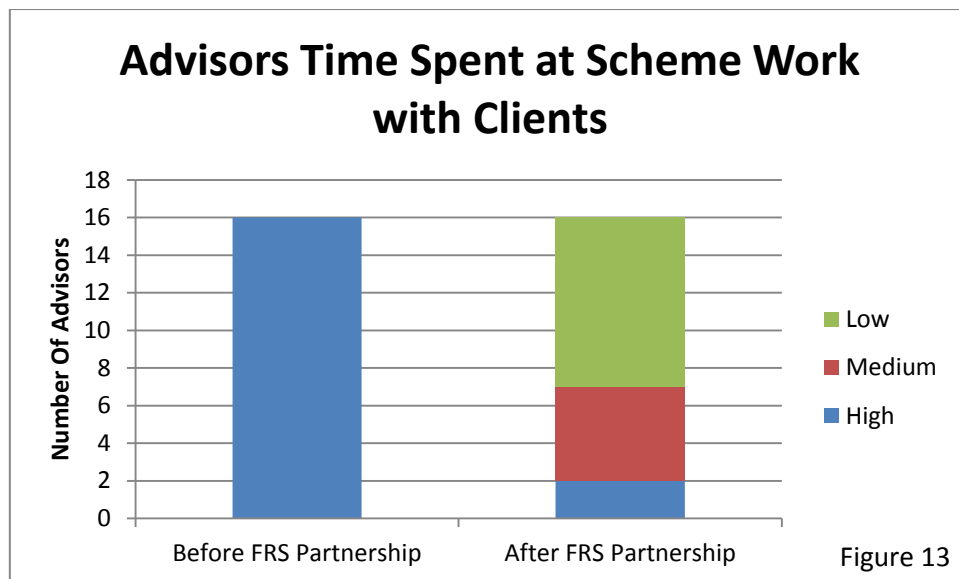


Figure 13 does not follow the pattern of the previous figures. Before the partnership between Teagasc and the FRS, all sixteen advisors were spending a high amount of time at scheme work. However, after the introduction of the Teagasc and FRS partnership, only two advisors were spending a high amount of time at this area, five were spending medium time at scheme work, while nine advisors were spending a low amount of time at scheme work as a result. Therefore, the majority of advisors dramatically reduced the amount of time they spent at scheme after the introduction of the Teagasc and FRS partnership.

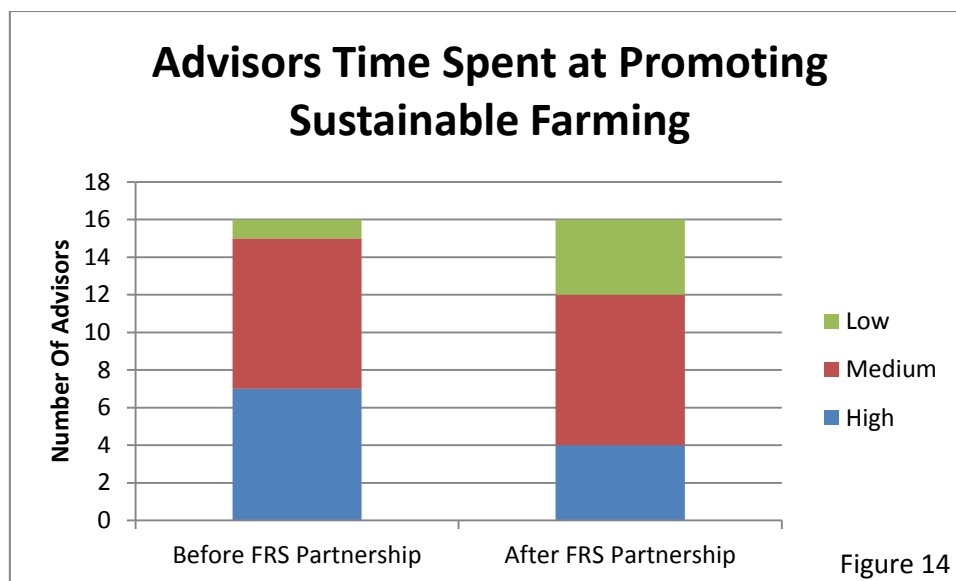


Figure 14 shows a decrease in the amount of time advisors spent at promoting sustainable farming to their clients. This could be linked to the GLAS environmental scheme where advisors reduced the amount of time they spent at this area. The number of advisors spending a high amount of time at this area decreased from seven advisors to four advisors after the partnership with FRS. Furthermore, the number of advisors spending a low amount of time increased from one advisor to four advisors after the Teagasc and FRS partnership.

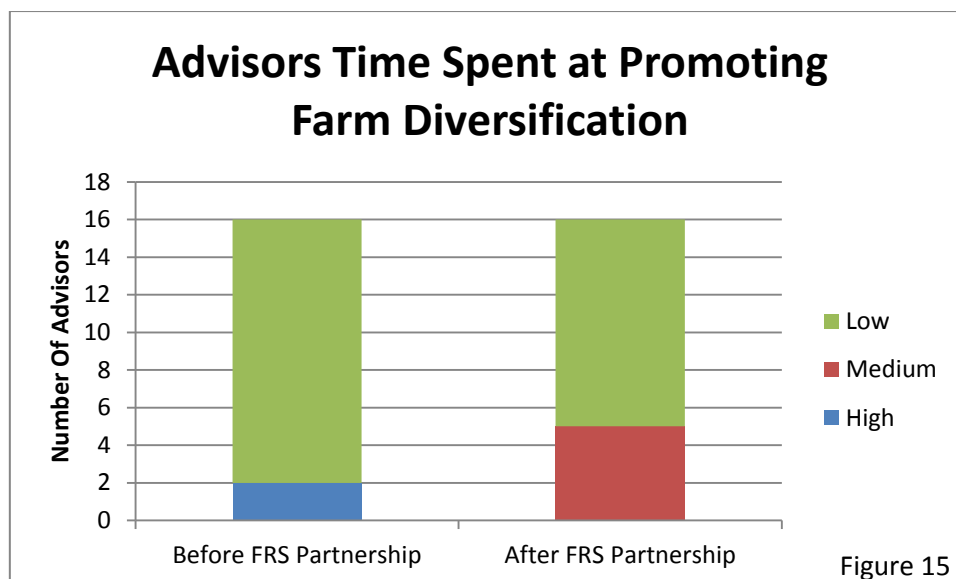


Figure 15

Figure 15 shows a similar pattern to the results in Figure 14. The amount of advisors spending a high amount of time promoting farm diversification before the FRS totalled to only two advisors but after the partnership with FRS it there were no advisors spending a high amount of time at this area. After the partnership with FRS, the majority of advisors were only spending a low amount of time at this area.

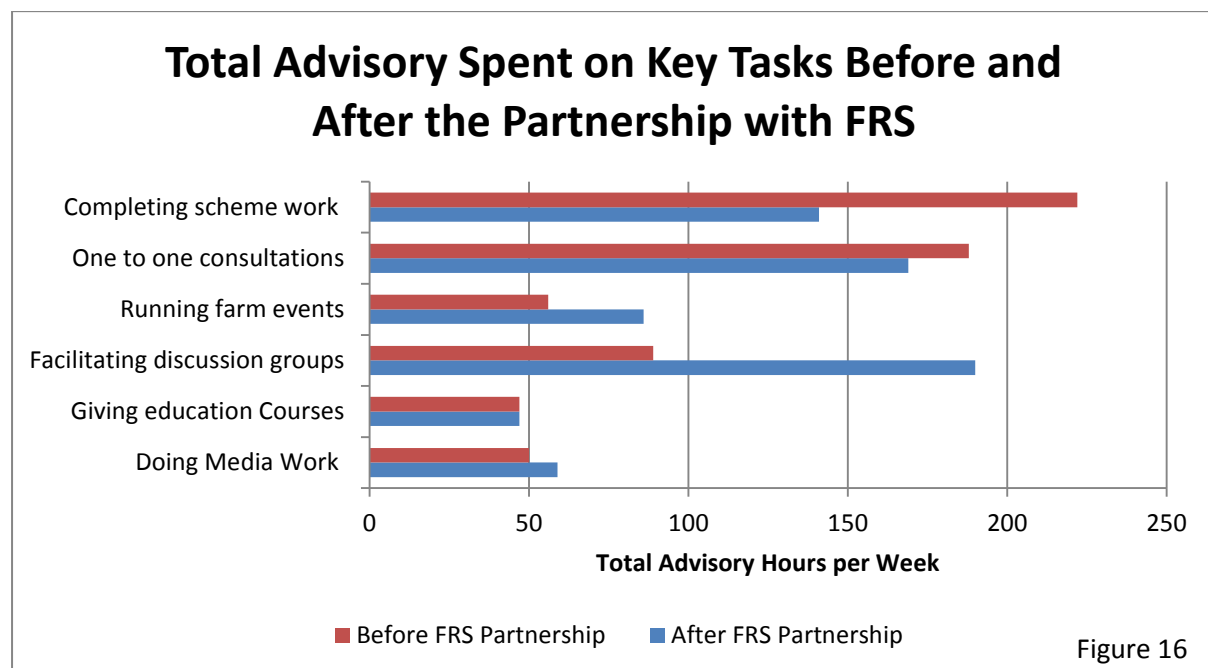
In order to triangulate the results from the survey, the advisors were asked to select the amount of hours they spent at certain tasks per week. The tasks were similar to the categories asked in the previous questions, however, the measurement of time was different. This was used to strengthen and verify the results being produced from the survey. In Figure 16 above, the red represents the amount of hours spent at certain tasks per week before the partnership with FRS was introduced. The blue represents the amount of hours advisors spent at certain areas of work per week after the partnership between FRS was established. The hours in the figure represents the total hours worked by all the advisors in the Mayo region for each week on average. These hours are not exact as the advisors estimated how much time they spent at each of the areas of their work.

Similar to the previous results produced by the survey, the amount of hours spent at scheme work was reduced dramatically. Advisors collectively almost spent over 220 hours per week completing scheme work before the partnership with FRS. Since the introduction of the partnership with FRS, this has reduced down to 140 hours per week; a reduction of over 35%.

The amount of time spent at one-to-one consultations decreased. Before the partnership with FRS, the advisors were spending 188 hours between them at consultations. However, this decreased to 169 hours after the partnership with FRS.

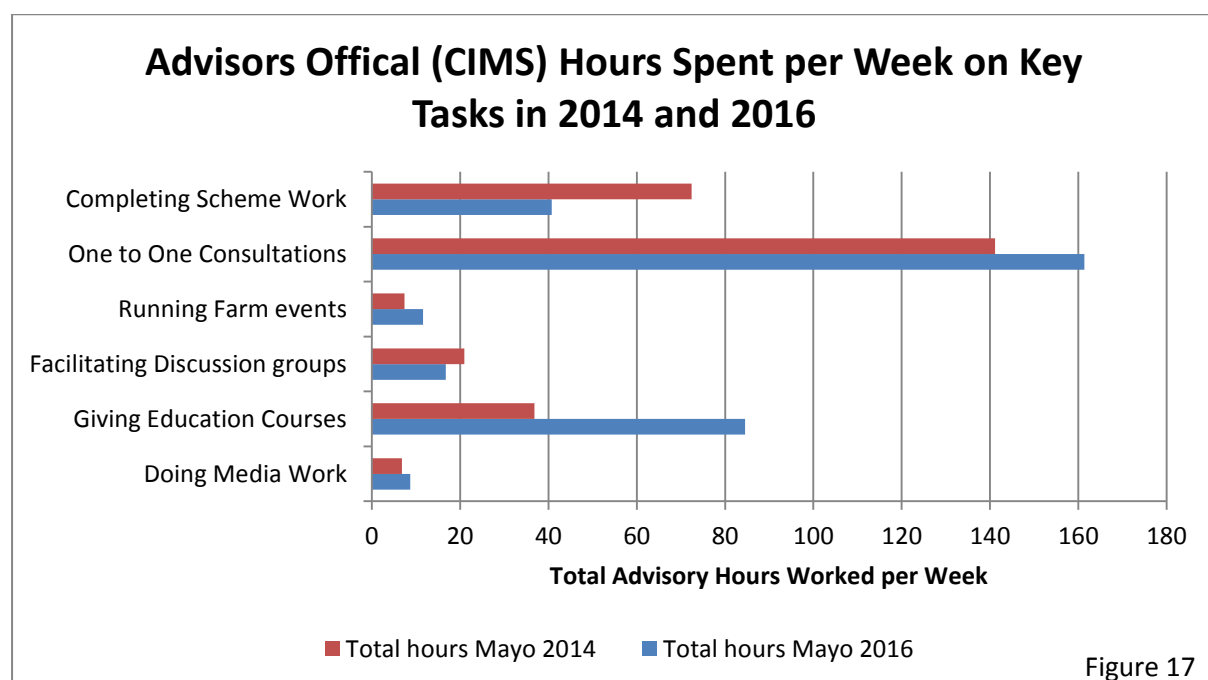
This could be a result of the huge increase in the amount of time spent at discussion groups. Before the partnership with FRS, Teagasc advisors spent 89 hours per week at discussion group work activities. However, after the introduction of the FRS partnership, the amount of time spent at discussion group increased significantly by 110% to 189 hours per week.

The amount of time spent at running farm events increased also, by nearly 1 hour per week. Holding education courses did not increase between the two periods of time. Completing media work increased by almost 1 hour a week also.



In order to compliment and strengthen the data collected from the survey, secondary data was gathered on the amount of time Teagasc advisors in Mayo spent at different areas of work. The areas of work examined were the same areas that were used in the survey. This secondary data was retrieved from Teagasc' own database. Advisors, at the end of each working week, submit the amount of hours they spend at different areas of work to the regional manager. These hours are then recorded and stored in Teagasc' central database. The data in Figure 17 above is from this Teagasc database.

The information that was retrieved from the database was the total amount of hours worked by Teagasc advisors over two different years at six key areas of work. The two years that were chosen were 2014 and 2016. The year 2014 was chosen because there was no FRS involvement in the provision of an environmental scheme with Teagasc in 2014. The year 2016 was chosen because the FRS and Teagasc partnership was well established by this year, and there was a lot of activity with GLAS scheme work in all of the offices.



Looking at the results from the secondary data, the amount of hours spent at scheme work dramatically reduced between 2014 and 2016. The amount of time spent at running farm events increased slightly. The amount of hours spent at media work increased also. The results from these three areas of work correspond with the data collected in the survey from the advisors.

However, there are some discrepancies between the primary data collected in the survey and the secondary data. The advisors survey results showed that they spent less time at one-to-one consultations after the partnership between Teagasc and FRS was introduced. However, the secondary data shows that there was a slight increase in the amount of hours spent at one-to-one consultations. The reason for this discrepancy is unknown.

Furthermore, the advisors felt that they spent the same amount of time at giving education courses to students before and after the partnership between Teagasc and the FRS was introduced. However, the secondary data shows that the advisors spent over twice the amount of time giving education courses after the partnership with FRS was introduced. The reason for this variation is unknown.

Advisors showed in the survey results that they spent more time at discussion group facilitation after the partnership was introduced. However, the secondary data shows that the advisors spent less time at discussion groups after the introduction of the FRS partnership. The discrepancy between the advisors opinion and the secondary data on hours spent at the different tasks over the two periods of time, is not a major concern as the time periods are somewhat different and the advisors were 'estimating' rather than recording systematically. . In 2014, there were two different DAFM schemes running that involved discussion groups. They were called the Beef Technology Adoption Programme (BTAP) and the Sheep Technology Adoption Programme (STAP) programmes. These programmes required advisors to hold discussion group meetings with their clients. This scheme was in operation for all of 2014. Therefore, there would be a lot more hours spent in discussion group meetings in 2014 compared to 2016. The reason the advisors indicated they were spending more time at discussion group meetings after the introduction of the partnership is because they did the survey in mid-2017, when the KT scheme was in full operation which may have misled their thoughts.

The fact that there is a difference in the amount of hours between the advisors' opinion on how long they spent at the different tasks over the two periods of time, and the results from the secondary data does not pose a problem. The hours were never going to be the same as the advisors were just estimating the amount of hours they spent each week at certain work activities. The pattern of how the hours increased and decreased before and after the partnership should have corresponded between the advisors opinions and the secondary data.

Looking at the data, the difference is not a lot, as the survey population is small. An answer from one advisor makes a huge change on the rest of the results.

Discussion of the meaning and implications of the findings:

The aim of the Teagasc and FRS outsourcing contract was to reduce the number of hours Teagasc advisors were spending at non-core knowledge transfer work. Heemskerk *et al.* (2006) defines outsourcing as an arrangement whereby a company enters into a contract with an external supplier to provide services that were previously provided internally. These services, or in the case of Teagasc, non-core knowledge transfer work, are outsourced so the company can focus on core business roles and cut costs. This non-core knowledge transfer work was identified by Teagasc as scheme work. The research shows that the advantages of outsourcing are cost-saving, performance measurement, better quality services and wider access to skills. However, the literature also points out the disadvantages with outsourcing, such as reduced accountability of the Government for contracted services, tendering problems, reduction in quality of services, negative effects on employment levels and conditions of employees working for contractors.

The advisors' opinions of their core knowledge transfer roles are very similar. All advisors agreed that improving clients farming income through improving farm profitability by targeting grassland management and breeding techniques were the main core knowledge transfer roles. This is a challenging task for the majority of advisors in the Mayo region, due to there being a high level of sheep and beef farms with low levels of profitability (Teagasc, 2016). Other factors such as topography, age of the farmers, average size of the farm holdings, but also the high levels of part time farmers can also be external factors making this a bigger challenge (Environmental Protection Agency, 2016).

The methods of transferring the core knowledge mentioned by advisors were very interesting. The different advisors mentioned a range of communication methods such as one-to-one farmer contact, discussion groups and public farm events to get the knowledge transferred through to the Mayo farming community. These three areas were also highlighted in the 'Teagasc Best Practise' conference in 2012 (Teagasc, 2012). One-to-one consultations were branded as highly important to help farmers focus on individual problems on their farms, and from there complete a thorough investigation with their advisor in a confidential manner. Discussion groups allow farmers to learn from each other's experiences and works best during farm walks when practical issues can be seen and discussed. Public events are a good way of show casing best methods of production and also have experts to demonstrate new techniques (Teagasc, 2013).

No advisor mentioned co-ordinating with other external members of the AKIS group. In the future, this interaction with external companies that are members within the AKIS system will be important to provide better services to clients. This interaction with external stakeholders within the AKIS system will be vital to try and eliminate conflicting information extension towards the Irish farming sector. This conflicting information could cause fragmentation within the Irish AKIS system (Teagasc, 2013). Hermans *et al.* (2012) emphasised the importance of all the stakeholders within the Irish AKIS system coming to shared visions, well-established linkages and information flows.

Teagasc advisors can be described as change agents. The change agent is seeking to drive innovation on behalf of the change agency i.e. Teagasc (Markham *et al.*, 2006). Trust plays a very important part in the advisors role as a change agent. They rely deeply on ‘honest brokers’ who are mostly fee for service consultants and have no pecuniary interest such as Teagasc (Ingram, 2008). Farmers gather advice and information from lots of different areas but it is very important to have a source that is independent and not tainted by commercial interests. Teagasc’ knowledge transfer is free of any commercial interest, which gives their farming clients more strength and security when it comes to making practical on-farm decisions. For instance, the joint programme between Aurivo and Teagasc for dairy clients that is currently in operation in the Mayo region. Aurivo is a large farming co-operative where dairy farmers supply their milk produce. In this programme, Teagasc advisors work in co-ordination with Aurivo advisors to help improve farm production and operational efficiencies on their client’s farms.

The advisors’ opinions of what non-core knowledge transfer work is very uniform. Over 90% of the advisors agreed that completing scheme work was not core knowledge transfer work. This is supported by Teagasc (Teagasc, 2015). Advisors did point out that they realise the importance of these schemes in supporting most of their client’s farm incomes. The DAFM review of 2016 showed that 111% of sheep farmer’s income came from direct payments from the Department of Agriculture (DAFM, 2017). While 133% of cattle rearing farmers income came from direct payments from the Department of Agriculture also (DAFM, 2017). However, advisors believe that their role, as knowledge transfer agents, is focusing on factors within the farm gate to improve overall farm profitability (Teagasc, 2017).

In order to make the findings from this study stronger, there was a need to gain an insight into how the advisors rated different areas of their work. 90% of advisors showed that improving

farm profitability was a critical part of their work, while one advisor voted it as somewhat relevant. Improving grassland management, breeding strategies on farms and financial management were all again highlighted by the majority of advisors as a critical part of their core knowledge transfer role. Advisors were asked in their opinion how much time they spent at these roles before and after the partnership with FRS. The time spent at these areas in the opinions of the advisors increased dramatically. The area that dramatically reduced to provide the extra time at the core knowledge transfer roles in advisors hours was the completion of scheme work.

As mentioned earlier in the discussion, Teagasc advisors were stirred down the path of completing high levels of scheme work for a large volume of clients at the expense of on-farm development with clients. McDonagh *et al.* (2013) highlighted Teagasc' change over the years towards a 'paper filling' and a 'paper enterprise' advisory service for direct payments from the EU. The results from this study have shown that Teagasc has turned towards on-farm development, by out-sourcing this paper filling enterprise. McDonagh *et al.* (2013) also emphasised the importance of extension agencies to come up with innovative approaches to improve their extension services to their clients. This method of out-sourcing is not the first time it has been introduced to a national advisory service. This method of out-sourcing public projects such as GLAS to FRS has been successfully achieved in other countries and is needed for extension companies to focus on their core work (Klerkx and Jansen, 2010).

The results support the literature behind the out-sourcing of agricultural advisory services. The main advantage of out-sourcing, especially in relation to Teagasc, is that it allows it's advisors to focus on their core knowledge transfer role by off-loading non-core knowledge work such as completing scheme work which does not require advisory development expertise (Heemskerk *et al.*, 2006). Furthermore, the out-sourcing of this non-core knowledge transfer improves the quality of service to clients as it saves advisors unproductively spending their time at work that does not require their expertise. Therefore, they can spend this time focusing on their core knowledge transfer roles with their clients (Thomson, 2007).

The data gathered from the Teagasc database that records the work hours spent at different areas by advisors supported the data gathered from the advisors. Again, the secondary data showed that there was a dramatic reduction spent at scheme work. This was the aim of the partnership between FRS and Teagasc (Teagasc, 2015). As a result, the advisors increased

the amount of time they spent at their identified core knowledge transfer areas after the partnership between FRS and Teagasc was introduced.

In summary, the primary and secondary data collected showed that there was a lot of time spent by the advisors identified non-core knowledge transfer work before the partnership with FRS. However, after the introduction of the partnership, the amount of time advisors spent at this non-core knowledge transfer work decreased dramatically. As a result, the advisors showed to have spent more time at their identified core knowledge transfer work instead. Their identified core knowledge transfer work in this study was identified as improving financial management of farms, improving grassland management with their clients, and improving breeding strategies on their client's farms to increase overall farm profitability. The advisors identified scheme work as non-core knowledge transfer work. This non-core knowledge transfer work was taken on by FRS, a private company, to help the advisors focus on their core knowledge transfer roles.

Conclusions

The data gathered from both the survey (primary data) and the CIMS database (secondary data) shows that the main aim of outsourcing work to FRS was achieved. Advisors spent less time at their identified non-core knowledge transfer work. This non-core knowledge transfer work was identified by the advisors as scheme work, such as the GLAS environmental scheme. The study showed that the advisors spent more time at their identified core knowledge transfer work as a result of more of their time being freed up from not having to deal with scheme work. The core knowledge transfer areas that received the most attention after the partnership with FRS include: improving farm profitability with clients, improving grassland management with clients and improving livestock breeding strategies with clients. The non-core knowledge transfer area that advisors spent less time at was scheme work.

Advisory literature has shown the importance of co-coordinating advisory services with other private agricultural companies. Otherwise, fragmentation is likely to occur. Out-sourcing work to other companies is not enough. Literature shows that Teagasc needs to link up with other stakeholders within the Irish AKIS systems to provide better services to their clients. Boyle (2012) explains that by doing this, outcomes in terms of best technology and practice adoption, will be improved by farmer clients.

Recommendations

A recommendation from this study would be that Teagasc sends out a report to the advisors on a regular basis, such as monthly reports. The report would contain a graph or data set that shows the advisor what they spent their time at over the last month. This would be a useful focus point for the advisors, as he / she would know if they are successful in spending time at their desired core knowledge transfer roles.

Looking at the responses from the advisors' survey responses closely, the amount of time each advisor spent at scheme work was different. In fact, there was a large variation. This shows that the incorporation of the FRS and Teagasc partnership worked better for some advisors rather than others. This questions the protocols that were introduced. If an efficient and effective protocol in dealing with the scheme work between the advisors and clients was put into place, then the amount of time advisors spent at scheme work should have been somewhat similar.

Teagasc should develop new relationships with other stakeholders within the Irish AKIS system. The joint programme between Teagasc and Aurivo in the Mayo region is a great example. Teagasc work with Aurivo to provide a specialised dairy advisory service to its' clients. The clients trust the information from the programme as Teagasc is not biased or tainted by private company objectives.

In conclusion, the partnership between Teagasc and FRS achieved its goal by reducing the amount of hours spent at non-core knowledge transfer work such as the GLAS environmental scheme work. As a result, advisors did spend more time at their identified core knowledge transfer activities. This shows that the Teagasc advisor perceives their roles as more specialised farm development advisors, rather than scheme administrators.

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