THREE TO FIVE YEARS ON - THE FARM BUSINESS RESILENCE CASE STUDY OF STRATEGIC PLANNING TO ADDRESS WICKED PROBLEMS IN FARM MANAGEMENT

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Abstract

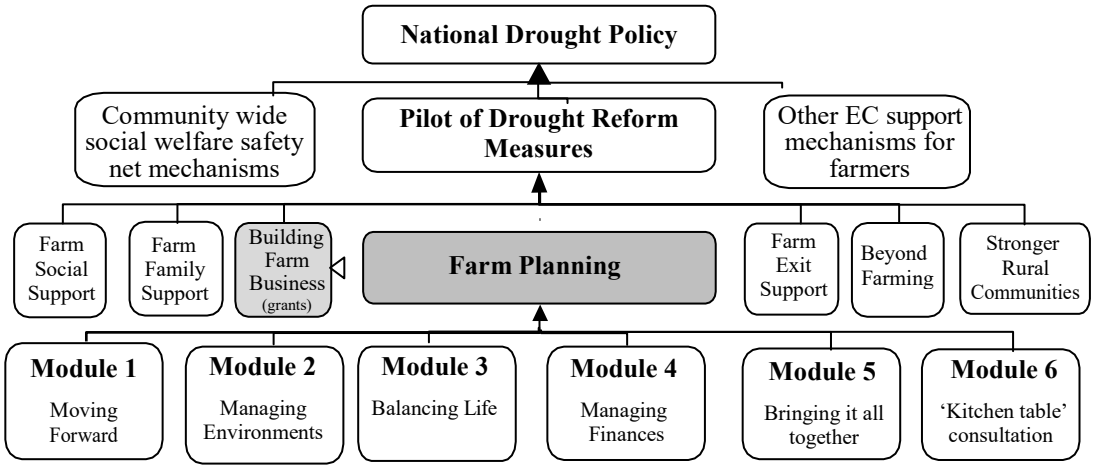
The Farm Business Resilience Program's delivery of the Farm Planning training program in Western Australia has delivered improved short to medium term, physical, financial, social and environmental outcomes for farm businesses. Through the delivery of an experiential "learning journey", using multidisciplinary facilitation teams to build strategic management plans led to improved strategic decision-making and business performance. Reported here is a range of benchmark performance indicators, which were unavailable at IFMA 21 - where attitude changes and plans to adapt and or transform farming practices were evident. Subsequent analysis indicates participants in the program show lower operating costs, improved return on capital, better operating profits/Ha, and improved indicators of 'resilience'. The shift in performance is in areas potentially most affected by climate change – the low and medium rainfall areas of Western Australia. Compared to other modes of farm management training, manifest here are the indications of practice change and the benefits of a facilitated learning journey to build capacity and innovation through strategic planning. There are clear implications for Government policy.

Keywords: Farm management training, facilitation, strategic planning; business resilience;

1. Introduction

The immediate and short-term impacts of interventions to mitigate the challenges of 'farming at the edge' (McGregor, 2003) in the south-west of Western Australia (WA) were reported at IFMA21 (Noonan, 2017). The interventions were part of the Pilot of Drought

Reform Measures in Western Australia (Council of Australian Governments, 2010), comprising a suite of measures introduced in July 2010 by the State Government of WA and the Commonwealth of Australia (Australian government), through the then Department of Agriculture, Forestry and Fisheries. The intent was to help build farm and rural community resilience, prepare farmers and communities for future challenges, such as, more turbulent weather events and climate change impacts. The pilot included seven inter-dependent measures, 'farm planning' (FP), 'building farm businesses' (BFB), 'stronger rural communities', 'farm social support', 'farm family support', 'farm exit support' and 'beyond farming'. Presented in Figure 1 are the linkages and interface between the various elements of the pilot and to the National Drought Policy, an instrument of the Council of Australian Governments (COAG), first instituted in 1992.



Source: adapted from Heath (2017, 2)

Figure 1: FBR and FP elements relationship the COAG Drought Policy

The pilot aimed to enhance the skills of farmers throughout WA in relation to business management, natural resource management, personal planning and development of strategic planning, with participants writing comprehensive written strategic plans to document the future of their farm business (Keogh et al., 2011). Another aspect of the pilot related to upskilling farm businesses to help improve viability during exceptional circumstances (EC). EC is the term used by Australian governments to describe catastrophic or similar events impinging on the ability of farm business to operate in a 'normal' manner, or beyond 'normal' risk management, often through the provision of financial support for activities deemed to better prepare businesses for EC, improve on-farm resilience and reduce environmental impact.

Curtin University's Farm Business Resilience (FBR) program pre-dated the pilot. FBR had successfully delivered a range of training programs to industry similar in nature to those proposed in the pilot. The terms FBR, Farm Planning (FBP) and the pilot are used interchangeably in many instances.

The FP program consisted of five modular workshops with an optional sixth; these used a facilitated learning approach (Noonan et al., 2012, Noonan, 2017) to enable farm businesses to plan strategically and were titled 'moving forward', 'managing environments', 'balancing life', 'managing finances' and 'bringing it all together'. After attending the first five workshops, there was an option for a facilitator to visit the farm for a 'kitchen table consultation' or for participants to go to a central location for assistance in finalizing strategic plans, and applying for consideration for government funding via BFB grants. On completion of the FP process, eligible businesses could apply for the BFB grants.

Under the auspices of Curtin's FBR Program, from February 2010 FP was pre-piloted until the federal and state governments announced the pilot in April 2010. The first phase of the pilot (P1) operated from June/July 2010 to April 2011 (P1), with follow up phases from September 2010 to December 2011 (P2) and March 2012 to May 2013 (P3). Curtin University managed the delivery of P1 (423 businesses), and P2 (296 businesses) with over 1200 participants across 50 locations. The Department of Agriculture and Food Western Australia (DAFWA), now a part of the West Australian Department of Primary Industry and Regional Development (DIPRD) since 2018, program managed the delivery of P3.

The leadership group of Curtin's FBR program, with the pilot content compilation and delivery teams for P1 and P2 of the pilot, including key DAFWA staff, had extensive experience in delivering a range of training activities to farmers in the preceding decade.

DAFWA rebadged the FPP as *Plan Profit Prosper* during P3.

Methods, evaluations and key initial findings and short-term outcomes of phases P1 and P2 were reported at IFMA 21 (Noonan, 2017).

Reported here, in abridged form, are the findings of three separate studies of pilot undertakings. The studies examined participants and non-participants in activities undertaken between 2012 and 2015 under the auspices of the pilot measures, and have only recently become available.

2. Methods

The initial basis for monitoring and evaluation processes for the FP drew on a number of factors, which were also considered in the evaluation of the wider pilot undertakings and a described in detail elsewhere (Noonan, 2017, Noonan et al., 2012, Storer, 2012).

To evaluate the interim and short-term outcomes of the delivery of FP a team of Curtin researchers, DAFWA evaluation specialists and independent evaluation consultants, formed a group known as the Resilience Evaluation Research Strategy Team (RERST). RERST formed to provide 'arms- length' evaluation of the FBP.

Curtin University students under the supervision of the RERST team conducted the first study considered in this paper. The study comprised two parts – one qualitative, the other quantitative, enabling a mixed mode analysis (Link, 2008). The study examined via voluntary responses to a range of focus group and questionnaire elicitations the impacts associated with delivery of the first two rounds of training for the pilot's FP; it concluded in mid-2012 and questioned P1 participants in and P2.

The second study (Connell, 2014) comprised two activities. The first activity examined responses to compulsory questionnaires by all participating FP businesses at the entry and exit of the program over the full three rounds (P1, 2 and 3) of FP - in excess of 1000 businesses. The study drew on previous reporting (Department of Agriculture and Food Western Australia, 2012, Department of Agriculture and Food Western Australia, 2011) enabled by the RERST team. The second, involved the identification of pilot participants who take part in a major benchmarking program involving WA broadacre farmers, with comparative analysis against benchmarked farms in the same region, but who were not the pilot, with further comparison against statewide average performance indicators for the period 2007 to 2013. The analysis included quantitative and mixed model analytics and concluded in the fourth quarter of 2014.

The final study examined the enduring impacts of the FP program by assessing activities and outcomes of businesses who participated in all phases (P1, 2 and 3) and who successfully applied for the associated BFB grants. It concluded in the third quarter of 2014.

Each of the three studies were conducted under the auspices of the RERST team associated with the first two phases of the pilot, or members of the RERST team in their substantive roles in the Rural Business Development Unit of DAFWA.

Except for substantial departures in the methodology described by (Noonan, 2017, Noonan et al., 2012), no further discussion of the methodology is included here.

3. Results

Presented are the key results of the three studies. Space does not permit a full exposition of all results.

Study 1

The qualitative part of this study included 63 participants from P1 and P2. The quantitate study included 185 survey respondents, including 68 participants from P1 (16% of the 423) and 17 from P2, a further 89 non-participating entities were surveyed. The sampling frames were broadly representative of production areas, business types and size as the pilot participants. However, the quantitative sample had younger and 'better' educated respondents to the P1 entry and exit surveys conducted by DAFWA. Notably there is a higher proportion of male respondents in the study, 72% (69 % for participants and 87% for non-participants (see Table 1)); whereas 64% were male which is commensurate DAFWA collected data.

Table 1 exhibits responses to descriptive questions for the two groups: pilot participants and nonparticipants. Participants were more likely to be female and to have a written plan for the next 5-10 years for production and finances. Participants also indicated a greater effort to make changes to manage natural resources and work life balance. Participants' markedly higher response to making changes to protect natural resources is also notable. Collectively these results, and others including factor analysis on future prospects and resilience (Storer, 2012), indicate achievement of the FPs core objectives.

Table 1: Study 1 - Key Differences between Participants and Non-Participants

Significant Descriptive Questions	**Mean Participants**	**Mean Non-Participants**
Have you heard about the Drought Pilot?	100%	74%
Have you heard about the FPP planning workshops?	96%	41%
Have you heard about the Building Farm Business Grants program?	94%	33%
Do you have a 5-10 year plan for production?	72%	40%
Do you have a 5-10 year plan for finances?	73%	45%
Do you have a 5-10 year plan for natural resource management?	69%	18%
Do you have a 5-10 year plan for work life balance?	61%	15%
Gender Male	59%	87%
You intend to make changes to protect or minimise the impact on the natural resources (scale 1 strongly disagree to 7 strongly agree)	5.6	4.9

Source: Adapted from (Storer, 2012, 78)

Qualitative questioning identified small numbers of participants who indicated a preference for reducing: the number of days for delivery of the modules and total time commitment; and felt that action learning exercises were questionable. A greater number of participants had a contrary view, indicating a preference for more action learning and time in total, valuing the time between modules to reflect and internalize the learning, and specifically valuing the one-on-one opportunity in module six. More comments that are positive were evident from locations where delivery teams had stronger competency in facilitation and understanding of production, financial management and work life balance.

Study 2

There is compelling evidence in this study of enhanced capacity resulting in improved business performance.

Comparative analysis between pilot participants in a benchmarking program into which many businesses from across the WAs broadacre farming regions contribute, other benchmark program businesses and statewide averages are notable.

Table 2 indicates drought pilot participants had stronger ‘short-term’ financial indicators compared to statewide averages and other benchmark program clients in 2013. In all but the Equity indicator, BFP participants demonstrated superior productivity and financial performance.

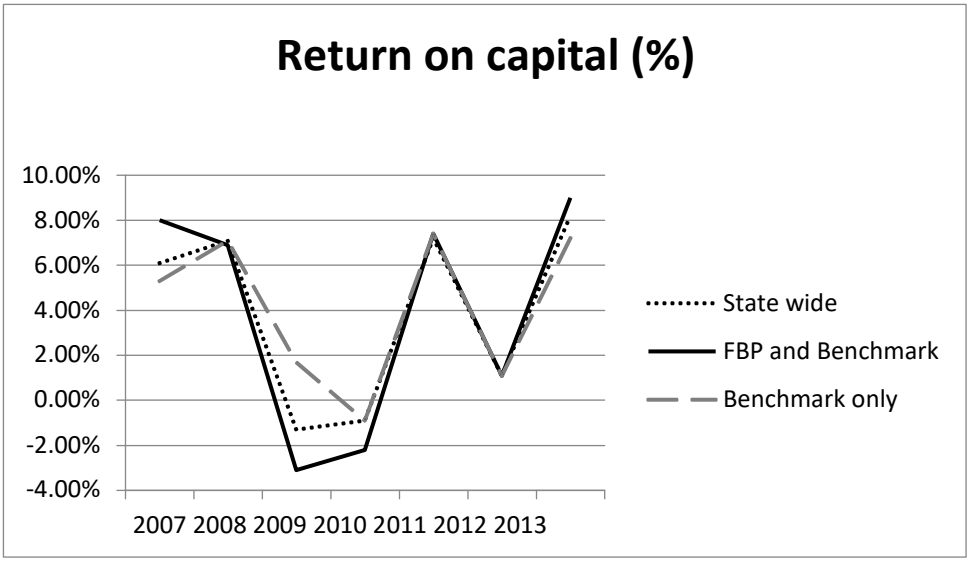
Table 2: performance measures for WA broadacre farm businesses in 2013

Financial measures for 2013	State-wide	Benchmark	Drought Pilot
Operating profit/ha	$238	$221	***$244***
Operating profit/Ha/mm GSR	$1.15	$1.07	***$1.18***
Operating cost%	56%	58%	**54%**
Return on capital	8.2%	7.2%	**9.0%**
Equity %	79%	**82%**	81%

Equity, in broad terms, is an indicator of accumulation or loss of capital over time. In WA farm management terminology, Equity is often described as a Statement of Position.

A multiyear view of the factors in Table 1 provides deeper insights. Figure 2 shows Return on Capital (ROC) for FP participants who are in the benchmarked series, benchmark farmers who did not participate in the pilot and statewide averages.

Figure 2: Comparative Return on Capital for WA broadacre farm businesses 2007- 2013



While the pilot participants had the highest return to capital in 2013 (Table 1) in the preceding years, they were lower than the benchmark and statewide averages. In subsequent years, there is upward trend for pilot participants beyond that of the others. While there may be other contributing and confounding factors to the participants uplift in ROC (Figure 2), at least some of uplift is attributable to the pilot.

Arguably, reduced operating costs are likely to be a contributing factor in the improved return on capital. Figure 3 shows operating costs for pilot participants has reduced below the State average and benchmark businesses, FP participant's higher cost in the year preceding the pilot appear to have reversed. Reducing cost was a key focus of the finance module of the FP program.

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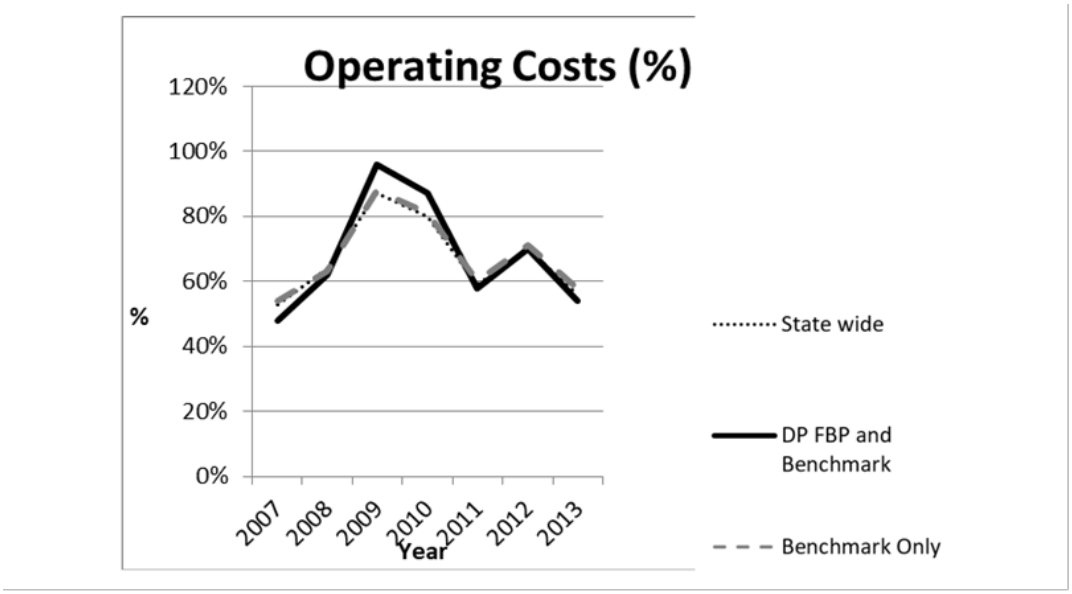

Figure 3: Operating Cost for WA broadacre farm businesses 2007- 2013

Intuitively reduced operating or marginal costs should bring down the total cost of production, *inter-alia* resulting increasing profitability. Figure 4 provides evidence of operating profit/ha improvement.

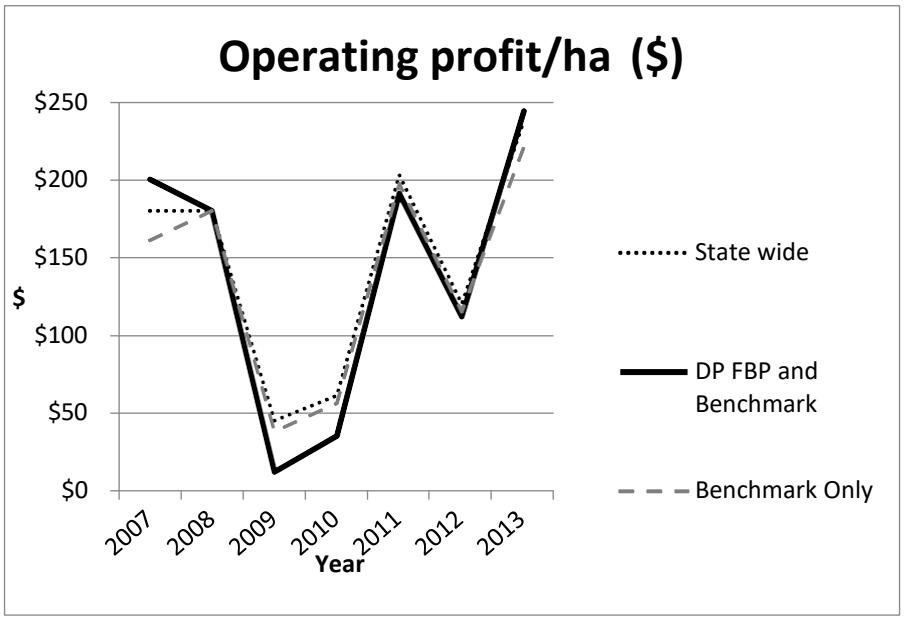

Figure 4: Operating profit/ha for WA broadacre farm businesses 2007- 2013

Year-on-year improvement in profitability is fundamental to an improvement in Equity or Statement of Position. Figure 5 shows the Equity position of pilot participants, whilst in comparatively greater decline prior to the pilot, has improved to a level comparable to other benchmark business. Again, while factors other than participation in the pilot may

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influence the improvement in Equity, at least some of this improvement is attributable to pilot.

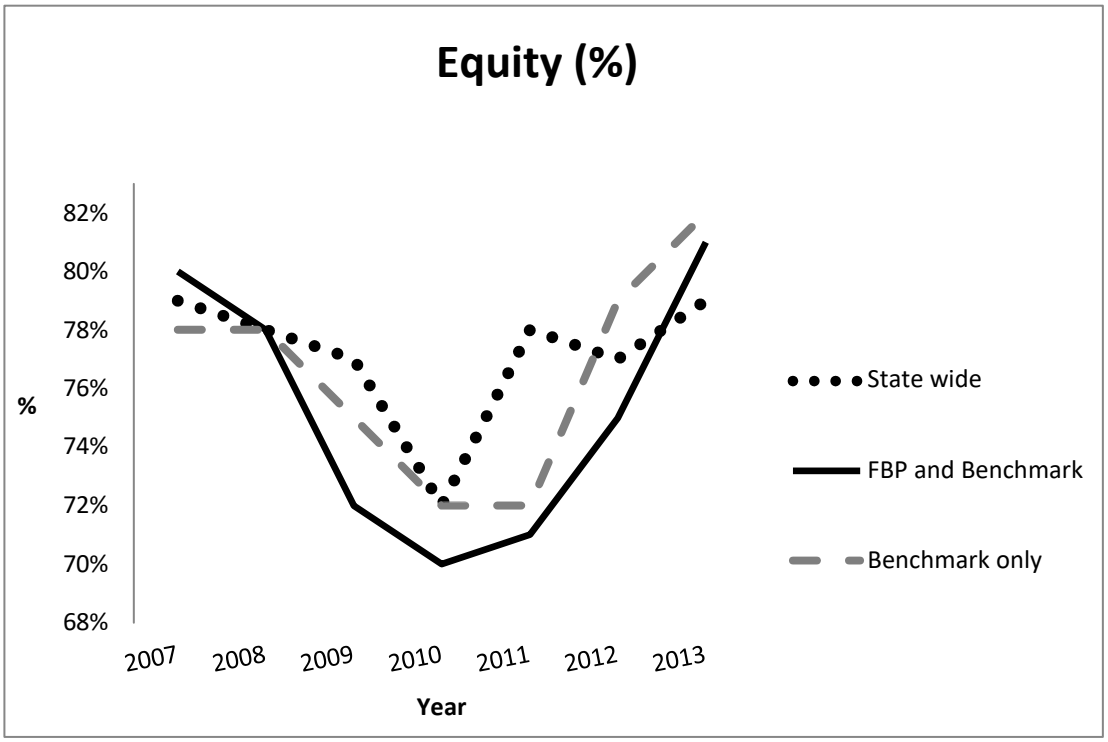

Figure 5: Equity of WA broadacre farm businesses 2007- 2013

Other qualitative information from this study indicates an uplift in production and financial performance for pilot participants; quantitative and qualitative surveys of the pilot measures support this observation.

Study 3

For Study 3 grant completion reports submitted by 748 participating businesses from P1 to P3 were reviewed and coded, enabling quantitative analysis. In addition, qualitative analysis of open-ended questions was completed. The data collected represented 5.7% of all WAs farm businesses across 89 local government areas, representing a robust sample of farm businesses from broadacre, dairy, horticulture, intensive and extensive livestock sectors. P1 participants were eligible for grants up to $AU60,000 and P2 and P3 were eligible for up to $AU30,000 via the BFB grants

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Table 3: Key performance indicators for BFB grants program

Outcome	
Applicants implemented the agreed activities developed in the strategic business plan.	76.9%
Farm businesses in P1 and P2 making co-contributions	68%
Farm businesses in P3 making co-contributions	48%

Source: compiled from Department of Agriculture and Food Western Australia (2014)

Summarized in Table 3 are indicator outcomes for the 748 FBP grant recipients. Compliance with agreed activities at such a high level is in part a function of the Deed of Agreement to accept the BFB grant; however, higher levels of compliance were precluded by acceptable delays and strategic changes. Notable is the higher level of co-contribution in P1 and P2.

The Department of Agriculture and Food Western Australia (2014) identified a plethora of positive outcomes consistent with those reported at IFMA21 (Noonan, 2017).

Importantly businesses who qualified for the BFB grants self-reported having:

1. clearer business vision and goals;
2. improved business management;
3. adopted a more self-reliant approach (P1 and P2 80% and P3 77.4%.);
4. adopted a more self-reliant approach and changes to managing farm business risk (P1 and P2 87.3% and P3 82.3%.); and
5. improved risk management capacity (76%).

Participants self-reported increased:

1. use of financial and general business management training compared to participants of previous training schemes;
2. measurement and comparison of performance as well as revisiting their strategic plan;
3. awareness of goals; and
4. collection and review advice from independent advisors and consultants.

Two specific outcomes were cross-verified in the mixed-methods analysis:

1. Measures of enhanced participant skills in business (including organization and time management), natural resource management and personal planning, with a consequence of more sustainable and efficient use of natural and water resources; and

2. Continued development and use of strategic business plans, improvement in adaptation and adjustment to climate variability by businesses that qualified for the BFB grants.

The study reports coding of qualitative responses indicated "more strategically focused business activities has supported reductions in human stress" (Department of Agriculture and Food Western Australia, 2014, 49).

Qualitative analyses using Bennett's Hierarchy (Bennett, 1975) identified major and significant uplift across numerous factors. There are simply too many to recount here.

Collectively the results of the three studies provide compelling evidence of the merit of the processes underpinning the FP program and the stimulus provided by the BFB grants.

4. Discussion

Facilitated strategic planning processes provide, in a number of instances, a pathway for participating businesses to expand social networks and increase connectedness to work in communities and promoted better work-life balance.

The outcomes of Study 1 (Storer, 2012) are largely supportive of the findings presented at IFMA21 (Noonan, 2017).

Important new findings are the significant impact of FP in terms of longer term planning horizons evidenced in those who had participated in P1 and P2 compared to non-participants (Table 1).

A noteworthy finding of Study 1 is provided in responses by participants in P2 whose broader experience was less satisfying than other participants in P2. In a number of these instances, the delivery was in groups where facilitators who did not receive preservice training from the FBR program and or where compression of delivery into shorter or irregular timeframes occurred. While there are small numbers in the sample size, this outcome warrants further investigation. However, in principle, having time for participants to digest the content of each module and internalize it, with the aid of facilitators whose competencies have been more rigorously assessed, and calibrated against the training package, with the collected team competencies, is a core contributor to successful adult learning outcomes. Anecdote from P3 supports these indications.

Study 2 study found strategic planning and access to implementation grants resulted in improved productivity and profitability (Connell, 2014). Productivity growth in the pilot

participants was stronger relative to State average and benchmark business performance in 2013. Moreover, appears to be on an upward trajectory.

Study 3 provides a range of metrics, some recorded for over four years after completion of the FP training, indicative of more directly attributable evidence for: improved productivity; economic performance; work-life balance; and continuation of the strategic approach to management approaches engendered through the BFB program.

The importance of an incentives to participate in the strategic planning elements were identified early in the evaluation processes as discussed at IFMA21 (Noonan, 2017). The initial importance was in bringing the participants 'into the room', that is, to begin the strategic planning. Data now available indicates offers of grant funding, coupled with travel allowances and childcare is a critical. The funding was a direct enabler of a range of strategic activities, which in turn resulted in improved performance at a technical level, resulting in enhanced financial outcomes.

In overarching terms, the planning processes undertaken through FP resulted in a more holistic business planning processes. The development of the strategic plan incorporated a range of adult learning methods, customized to the specific needs of the participants. Most importantly, on average, at least to members of the family farm business, participated in the development of the strategic plan. Such a level of involvement, deepened in roundtable conversations between modules and at the optional kitchen table module, enabling those directly participating in the learning process to share with other family members their experiences.

The resilience of the participating farm businesses, has arguably improved and there are opportunities for farmers who have not accessed this type of learning program. The strengthening of adaptive capacity of a farm via the facilitated learning journey, with the provision of grants tied to activities identified in strategic plans developed by the farmers, provides a safe environment "learning through experimenting and monitoring its outcomes, ensuring a flexible farm organization" (Darnhofer et al., 2010, 545). Improvement in adaptive capacity and resilience appears, on face value, is consistent with similar but unrelated capacity building programs based on use of 'positive education and training' in schools and universities (Seligman, 2018) and soldiers in armed conflict (Reivich et al., 2011).

Pilot participants are now independently reworking their strategic plans. With comments similar to 'and now it is a better plan!' This is testament to the successful imparting of strategic planning processes.

Reliance on interest rate subsidy and similar support mechanisms, including consultant prepared strategic plans, which can foster 'learned helplessness' (Abramson et al., 1978), have historically not provided substantive, nor sustained benefit to target businesses (Howden et al., 2010, Murray-Prior, 2014, Balm, 2002, Patterson, 2008, Price Waterhouse Coopers, 2006). While it is appropriate to provide safety nets and 'exit' mechanisms for businesses in irretrievable circumstances, overreliance on positioning of "ambulances at the bottom of a cliff" (Seligman, 2018, 280) and support packages that don't internalize learnings are unlikely to bring about positive change. The findings presented here reinforce the potential impacts of climate change and related factors on decision making and thereby business resilience. Government and related institutions (Nelson et al., 2010, Howden et al., 2010), identify are range of impacts, such as the impact of drought on mental health (Berry et al., 2011, Drought Policy Review Expert Social Panel, 2008, Horton et al., 2010) and stress (Gunn et al., 2012). The propect here, in part, is of the facilated leaning journey mitigating the negative consequnces of undesirabe impacts on the decision making and resilience of farm managers and buinesses.

The identified need for continuing longitudinal analysis (Noonan et al., 2012, Noonan, 2017) is supported by the DAFWA after its investigations (Department of Agriculture and Food Western Australia, 2012, Connell, 2014). Further investigation should explore not only the longer term productivity impacts of the BFB grants (Department of Agriculture and Food Western Australia, 2014) and other direct benefits, but should also consider exploring collateral or 'horizontal' and unanticipated impacts.

Policy implications

Prima facie, the allocation of government funds and resources to enable strategic business planning, training and financial support in EC more effectively uses the 'public purse'. Facilitated adult learning to self-create strategic business planning has enhanced farm businesses capacity. Therefore delivering better bottom line outcomes for the prosperity of the farm business, the well-being of the farming family and the farmed and natural resources including the environment and therefore the wider society.

Positive behavioral and practice change initiated in the training provided in P1 to P3 of the FP deepened in those businesses who accessed grants under the BFB program; therein

lies an important message for the policy agenda in the future. The ability to access and utilize grants is a major incentive for participants to enter such programs, to strategically plan, adapt and innovate, and perhaps transform. More importantly those who received or leveraged the BFB grant via their co-contribution were investing in a more resilient future for their business, in all likelihood reducing subsequent calls for support from government and EC measures.

Given the overarching objective for the pilot to assist farmers in taking responsibility for risk management and internalizing the real prospects of climate variability, the grants have resulted in desirable decision-making and practice change. Future policymaking processes would be unwise to discard or discount these behavioral and practice outcomes.

5. Conclusion

It is now apparent taking a facilitated learning journey approach to strategic planning enables more farmers to effectively address complex messy challenges such as increasing turbulence in climate and weather, market variability, and time critical production decision making. Now clearly identified are improved financial performance markers and other indicators of management capacity beyond the immediate short term for those who completed FP training founded on the FBR processes and utilized BFB grants to build enduring business resilience

There are notable and important policy implications. Building adaptive management capacity, in farm managers, leading to transformative capacity, will be an important tool for agribusiness and farm management into the future. The use of a range of strategic management tools can better prepare farm businesses' for 'future shocks', inherently reducing the need for support from Government.

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