Worklife Satisfaction – Subjective Wellbeing in the Workplace

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Abstract

Based on extensive evaluation of the literature on subjective wellbeing generally and the role of the workplace in particular, a model has been developed to investigate the short and longer term implications of company policies on staff wellbeing and company performance. The focus of the research is the hotel business, although the findings can be translated to many other similar businesses.

A dynamic hypothesis was developed iteratively by the authors through discussion of the literature in the light of the company's database of data, surveys and anecdotal experiences. The model seeks to identify the key dynamics linking company performance and worklife satisfaction, i.e. that component of subjective wellbeing that is influenced by the workplace environment. Factors considered include the labour budget and the role of managers in the business, including how their own actions are affected by company performance, and how their actions influence the worklife satisfaction of their staff.

As examples of the application of the model, experiments are documented including those associated with changing market conditions, work hours allocation and changes in payrates. Some counter-intuitive behaviour is observed, highlighting the dynamic complexity of the business environment.

Keywords

Wellbeing, Labour, Management, Policy, System

Introduction

Subjective well-being (SWB) is defined as 'a person's cognitive and affective evaluations of his or her life' (Diener, Oishi, & Lucas, 2003). The term SWB is interchangeable with happiness (Easterlin, 2001; Seligman, 2002; Wright & Cropanzano, 2000) and labelling variations are common in this area, for example (Keyes, Shmotkin, & Ryff, 2002) and (Ryff & Keyes, 1995) refer to SWB as the hedonic aspects of happiness. The New Economics Foundation (NEF) Wellbeing at Work Survey (2014) argues that SWB can been seen as comprising of three components, hedonic which refers to people's feelings or emotions, such as happiness or anxiety, eudaimonic which refers to leading 'a life well lived', interacting with the world around you to meet basic psychological needs such as experiencing a sense of competence or sense of meaning and purpose, and evaluative, the way that people evaluate their lives with regard to their own appraisals of how life is going. (Diener, Larsen, &

Emmons, 1984) argue that there are three hallmarks to SWB. First, it is subjective as it resides within the total experience of the individual. Second, it is not just the absence of negative factors, but also includes positive measures. Third, it includes a global assessment rather than only a narrow assessment of one's life domain.

Human beings are creators and explorers, they aim to discover, build, innovate, and change the world around them. Therefore, the quality of work life, the single biggest part of our waking adult lives, must surely count heavily for the quality of life (Helliwell, 2016). SWB is impacted by genetics, mood and emotional state; these along with age are likely to play a part in workplace SWB. (Clark, Oswald, & Warr, 1996) and (Birdi, Warr, & Oswald, 1995) found that job satisfaction is typically highest among older and the youngest employees, declining in the middle years, before rising again with age. What about the employee's personality? Each of the 'big five' dimensions of personality (neuroticism, extraversion, openness to experience, agreeableness and conscientiousness) have been shown to correlate with job satisfaction (Judge, Heller, & Mount, 2002). Even research into the relationship between SWB and education has pointed to lower SWB among more educated workers (Warr, 1992) and (Clark, et al., 1996). Whilst these employee characteristics impact SWB, it is difficult for organisations to factor in every aspect of the employee's characteristics whilst formulating any job deign, working environment and wellbeing strategy.

The Department for Business Innovation and Skills (DBIS) report (Bryson, 2014) into worker wellbeing suggests that an individual's SWB at work is influenced both by their individual characteristics, and the features of their job and workplace in which they are employed (p.52), see Figure 1.

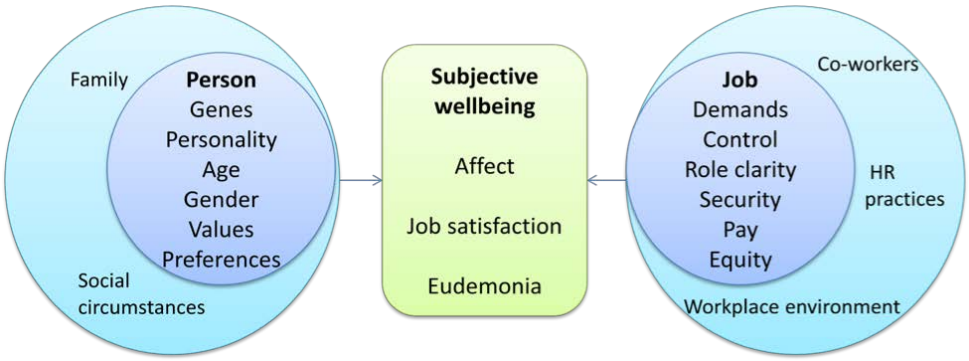

Figure 1 Subjective wellbeing, social circumstances and the workplace environment

Whereas Diener et al (1999) and (Warr, 2007) identify what internal components drive the individuals SWB, the DBIS model provides a useful distinction between not only the personal characteristics of SWB, but also the job characteristics that impact SWB. The model shows the personal characteristics that shape a person's experience of the workplace are highly unlikely to be influenced or changed by workplace policies. The job characteristics are what can be influenced by company policy. One can see that should job demands, control over one's role, clarity on what is required, security from a safety point of view, pay and equity be poorly managed, the capacity to lower SWB is increased.

Worklife satisfaction – the dynamic hypothesis

Given the nuances of SWB and its ability to be improved or hampered by many factors both personal and work related, a linear thinking approach to formulating recommendations about workers SWB will not suffice. So how can system dynamics help companies to improve employee wellbeing to improve business outcomes?

Systems thinking focuses on understanding flow and movement, specifically, processes, patterns and relationships (Meadows, 1989). Therefore, by deploying a systems approach to the problem, one can explore the interconnections between SWB and workplace factors. In exploring SWB through system dynamics, we posit that a company will be able to deploy a discipline for seeking to see the whole picture, a framework for seeing the interrelationships rather than things, and for seeing patterns of change rather than snapshots (Senge, 1990).

Although a person's personal circumstances and their life at work do combine in affecting their SWB (Figure 2), it is not feasible for a company to intervene in all of their employees' personal circumstances. This work therefore focusses on that which the company can influence, a term we refer to as worklife satisfaction (WLS). The hotel business is the main focus of this work, although its relevance to other similar types of businesses across the retail world, and beyond, is strong. The objective of the work is to gain an understanding of how company policies and practices influence worklife satisfaction and in turn how these affect company performance.

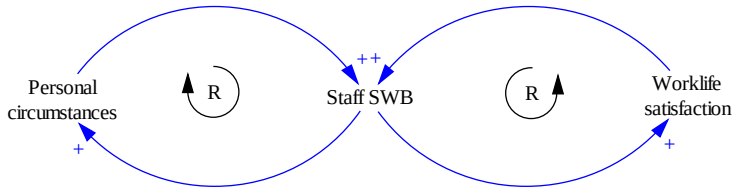

Figure 2 Subjective wellbeing and worklife satisfaction

Worklife satisfaction is posited here as one aspect of overall 'life satisfaction', which has been used as a measure of subjective wellbeing for many years (Pavot & Diener, 1993). Respondents to life satisfaction surveys evaluate their life on a scale from 'very satisfying' to 'very dissatisfying'. This very simple approach, although imperfect, has nevertheless been found to be relatively reliable (i.e. repeatable) and stable over time and through events, although a person's immediate affective state accounts for some of their response to overall life satisfaction (Ross, Eyman, & Kishchuk, 1986).

A causal loop diagram (CLD) (Figure 3) [1] was developed iteratively by the authors through discussion on the literature cited above in the light of the company's database of data, surveys and anecdotal experiences. It seeks to identify the key dynamics linking company performance and WLS (Figure 2). The top part of the CLD illustrates the work factors that influence WLS and company performance, particularly those determined by the labour budget. The lower part of the diagram reflects the role of managers in the business, including

[1] For clarity only arrows depicting negative causation are shown – all others are positive.

how their own SWB is affected by company performance, and how their actions have knock on effects for staff.

R1 and associated loops reflect the reinforcing nature between company performance, the labour budget and WLS. When company performance is improving, the labour budget also is (able to be) increased. This means that staff numbers are adequate, job demands reasonable, fatigue is reduced and WLS is raised, thereby improving productivity and further improving company performance.

Many other reinforcing loops are triggered similarly. Job security is enhanced, hours worked, pay rates and hence remuneration is improved. There is more training and more opportunities to progress in a successful company, leading to longer length of service, which in turn gives rise to higher pay rates, less labour turnover (LTO) and lower recruitment costs (Loop R3). Improved WLS itself leads to better performance and greater length of service, which also influences payrates / remuneration (Loop R5).

The labour budget is however a significant element of overall costs and increasing it immediately and directly impacts company performance, which identifies the key balancing loop in the system (Loop B1).

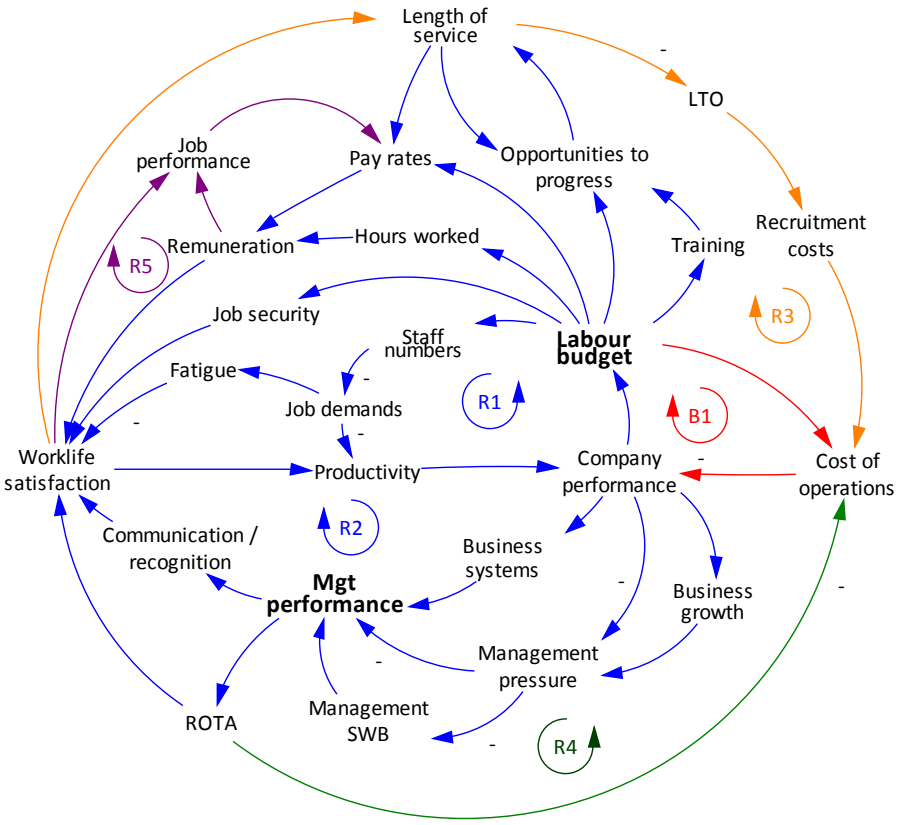

Figure 3 Causal loop diagram of worklife satisfaction

Much of the management influence on WLS in the hospitality business derives from the allocation of work hours, and communication with staff, particularly recognition of performance (Loop R2). The business systems available to managers are of course also

reflective of company performance and these systems are the tools with which managers direct their operations and deploy staff.

In businesses where staff are deployed on a weekly basis such as the hotel business, the allocation of hours (ROTA)[2] is a particularly sensitive issue. Changing, or cutting allocated hours often gives rise to dissatisfaction. Either under or over-allocating hours has a direct impact on the cost of operations (Loop R4). However an accurate ROTA, i.e. one that matches the hours needed with the hours allocated is elusive, as it requires expectations to match reality. Expectation formation is a strong theme in many system dynamics models (Radzicki, 2004) and its application in the hospitality industry deserves further study.

The Model

A system dynamics model was developed using the Vensim software to explore the dynamics of the system as described above. The model operates on a weekly time step over a five year period.

The centre piece of the model is the WLS module which is depicted in Figure 4.

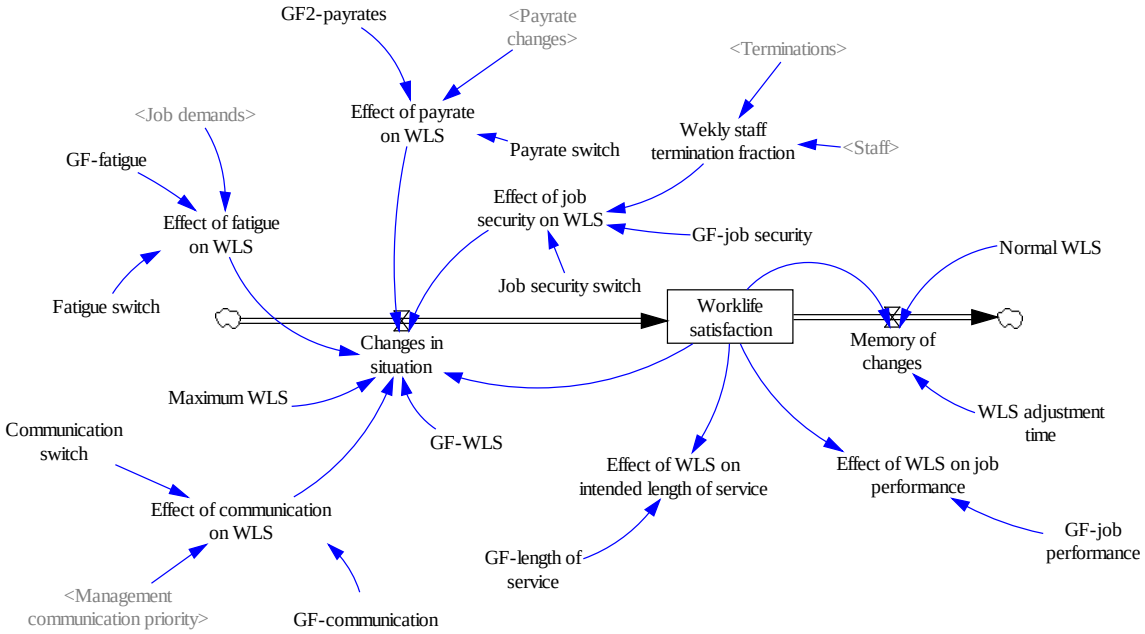

Figure 4 Stock and flow structure of the worklife satisfaction module

Mirroring the life satisfaction scale, WLS is modelled as a stock, which is impacted by changes in the work environment arising from a number of sources: payrates, fatigue, job security and communication with management. The model was structured with 'switches' that enable each of these influences to be invoked independently or together. As with life satisfaction more generally the experience of companies is that 'events' such as pay rises have a time limited effect and hence the WLS stock reverts to a 'normal' level over an adjustment time, reflecting a process known as 'adaptation'(Diener, Lucas, & Scollon, 2006). However other factors such as fatigue, are ongoing and hence have an ongoing impact on

[2] A British term for a list showing when each of a number of people has to do a particular job.

WLS while they persist. Graphical functions regulate the 'strength' of each influence on WLS.

The level of WLS has two effects in the model, the job performance of staff and the intended length of service. Improved job performance enhances client satisfaction, which influences referrals and hence the revenue of the company (and of course vice versa). Increasing the length of service leads to an increase in pay rates (wage costs), but a decrease in staff recruitment costs. The cumulative company performance (i.e. the accumulation of weekly performance) determines the amount of money spent on staff training. Training influences the intended length of service of staff. For simplicity it is assumed that all other weekly costs are fixed.

The allocation of hours (ROTA) is determined by managers on a weekly basis and the model assumes typical system dynamics treatment of forecasting their allocation. Firstly managers receive historical information on hotel occupancy levels and so there is an information delay. Secondly there is an information smoothing process. Both combine to make a forecast by managers of the hours to be allocated to staff in the coming week. The difference between the hours allocated and the actual hours required gives rise to two factors: job demands on staff that are either increased or reduced from normal (with flow on effects on fatigue and WLS) and either a saving or unnecessary expenditure on staff, which influences costs.

The number of staff in the business is regulated by market conditions. Management set a target number of staff based on their perceptions about further occupancy, which is drawn from historical information, smoothed over a certain period. When staff numbers are reduced beyond the normal churn (associated with intended length of service), some staff are terminated. Such terminations are deemed to impact the staffs' sense of job security which influences WLS.

The effectiveness of management communication is difficult to incorporate in the model. Simplistically it is assumed that this is determined by the priority it is given by managers, set simply in the model as normal, high or low.

The forgoing illustrates the myriad of factors that affect the dynamics of the situation, and accordingly the difficulty for management of developing successful policies that simultaneously improve WLS and company performance. Some of these difficulties are illustrated in the results of some preliminary experiments carried out using the model.

Experiments

Changing market circumstances

Case 1A represents a permanent increase in the hotel occupancy share of 5% above normal levels (equilibrium conditions). The increase takes place slowly over a year and this scenario could reflect success from a marketing campaign, loss of competition or a number of other factors.

During the year of the increase, managers are slow to recognise the permanency of the situation, continue to forecast based on time lagged historical occupancy, and hence

underestimate demand, resulting in insufficient hours allocated to staff to service the clients (Figure 5a)[3].

Although this saves the company some money in staff costs, it increases the job demands on staff, creating fatigue and a consequent reduction in WLS and an increase in resignations (Figure 5b). Karasek (1979) found that mental strain results from an interaction between job demands and the employee's control over their work situation, and that these factors correlate with job dissatisfaction. In the scenario modelled, both elements are in play, i.e. increasing job demands and an inability to control the work situation.

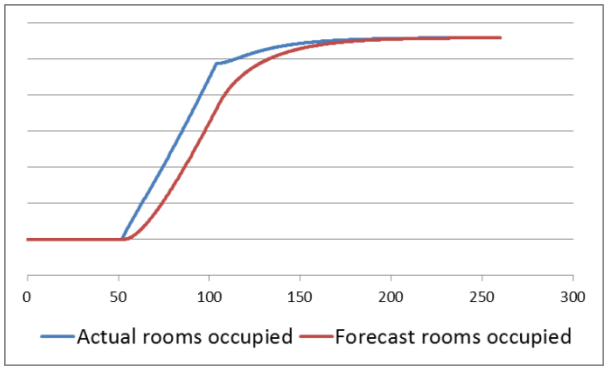

Figure 5a Case 1A Actual vs forecast occupancy

Figure 5b Case 1A Worklife satisfaction & resignations

However as the increasing occupancy settles into a new pattern after a year or so, WLS rebounds (Figure 5b), revenue rises, the hotel performance improves and some of the benefits are re-invested in staff training (Figure 5c) which, over time, increases the average length of service (Figure 5d). As a result of this, although wage costs are higher due to the newly engaged staff (Figure 5d), cumulative company performance improves.

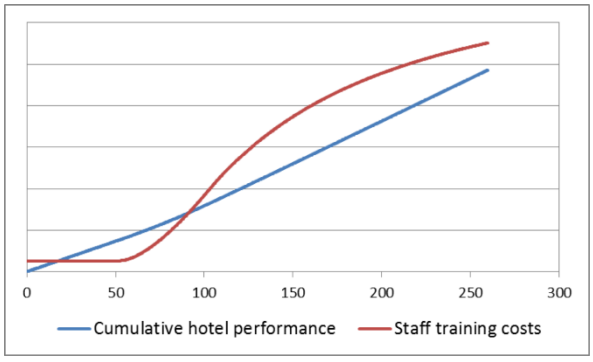

Figure 5c Case 1A Performance and training costs

Figure 5d Case 1A Wage costs and length of service

So what are the dynamics when the exact opposite of this occurs, i.e. occupancy drops by 5%. As expected (Case 1B), much of the narrative above is similar but inverted: job demands reduce during the transition period and WLS improves, although not as much as it was raised in the previous case (Figure 5e).

[3] In all graphs depicting experimental results, the x axis is in weeks. Although the model is fully parameterised, the scales have been removed from graphs to highlight the directionality of change rather than magnitude.

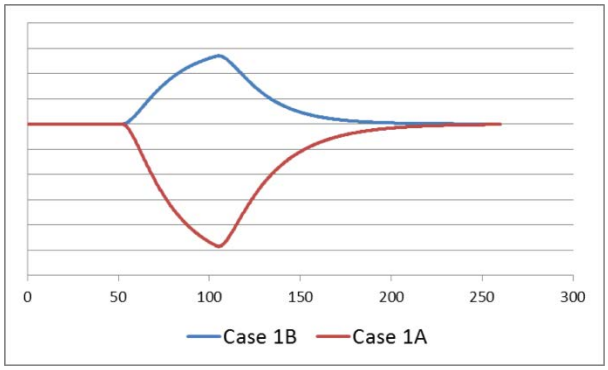

Figure 5e Case 1A & 1B Worklife satisfaction

Figure 5f Case 1B Staff resignations and costs

As hotel financial performance is down, investment in training is reduced and more staff look for other opportunities (Figure 5f), increasing recruitment costs even as staff numbers are trimmed to reflect reduced demand (Figure 5f). At the end of the simulation period total staff expenditures are continuing to slowly rise (Figure 5f).

The different dynamics between the two cases is a result of non-linearity in the relationships between the variables: fatigue is felt more than relief from fatigue, and training costs are cut in bad times more than they are raised in good times. This non-linearity has been incorporated into the model on the basis of the famous work of Kahneman and Tversky (1979) on 'prospect theory' which proposes that individuals weight losses more than equivalent gains.

Squeezing the staff

In Case 2A, the weekly hours allocated to staff are cut by 5% in an attempt to reduce costs. However this leads to an immediate increase in job demands, fatigue and lower WLS (Figure 6a). These results are again consistent with the literature on the implications of increasing job demands on worklife satisfaction, but arguably are reinforced by the deliberate action of management to increase the workload of staff, thus reducing their control over their worklives. This adversely impacts job performance and leads to resignations (Figure 6b), with recruitment costs now offsetting wage savings (Figure 6c).

Figure 6a Case 2A Job demands and worklife satisfaction

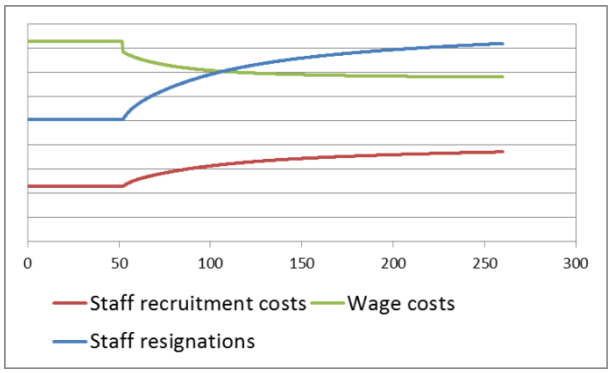

Figure 6b Case 2A Staff resignations and costs

The inferior job performance translates to lower levels of client satisfaction and hence hotel occupancy reduces (Figure 6d), adversely impacting revenues. Over the longer term the hotel bottom line suffers more from the adverse effects than it gains from savings (Figure 6e). This

result is consistent with the literature, which indicates strong correlation between employees' well-being at work and organisational performance (Aketch, Odera, Chepkuto, & Okaka, 2012).

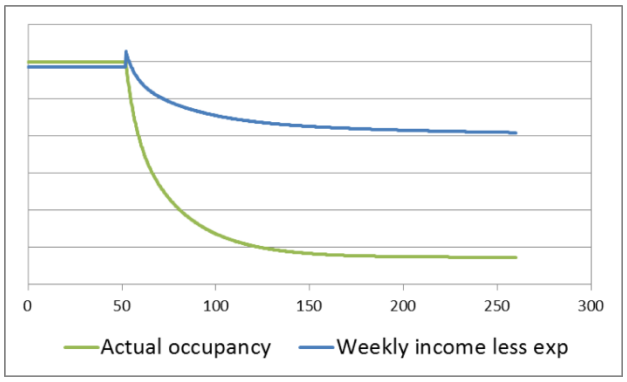

Figure 6c Case 2A Occupancy and hotel performance

In Case 2B the opposite policy is implemented, i.e. an increase in allocated hours of 5% is applied. In this case, job demands are reduced, leading to lower levels of fatigue. However the benefits to WLS are lower than the negative impact of reduced hours in the previous case (Figure 6d). Nevertheless job performance and client satisfaction increases, leading to improved revenues. There is more money for training and this together with greater WLS leads to fewer resignations. This reduces recruitment costs and although overall staff costs are higher (Figure 6e), the net impact on the business is slightly positive (Figure 6e).

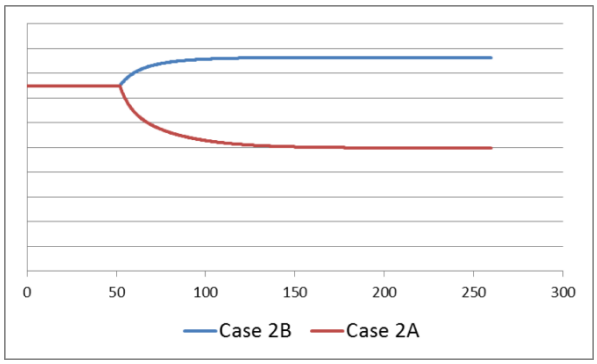

Figure 6d Case 2A & 2B Worklife satisfaction

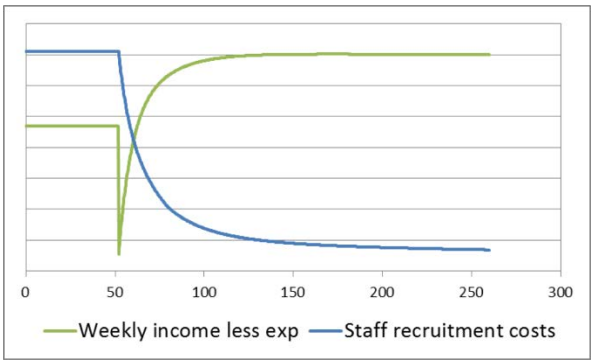

Figure 6e Case 2B Recruitment costs and hotel performance

Again the difference in behaviour between the cases is due to non-linearities: reduced job demands are not felt to the degree that increased job demands are; job performance does not improve as much as it previously declined; and resignations do not drop as much as they previously increased.

Changes in payrates

Although the influence of income on subjective wellbeing is complex (Diener & Biswas-Diener, 2002), the evidence for positive correlation exists (Mullis, 1992). In Case 3A the payrate of staff is increased by 5%, immediately increasing wage costs. This causes a spike in WLS, but this dissipates over time (Figure 7a). Accordingly, job performance also improves initially but then returns to normal levels. There is a similar spike in revenues and then a

return to normality. In overall terms the higher wage costs (Figure 7a) are locked in but the benefits are shortlived, meaning overall hotel performance drops slightly (Figure 7a).

Case 3B (a payrate decrease of 5%) has the opposite effect on WLS although the initial impact is greater in magnitude (Figure 7b) due to prospect theory.

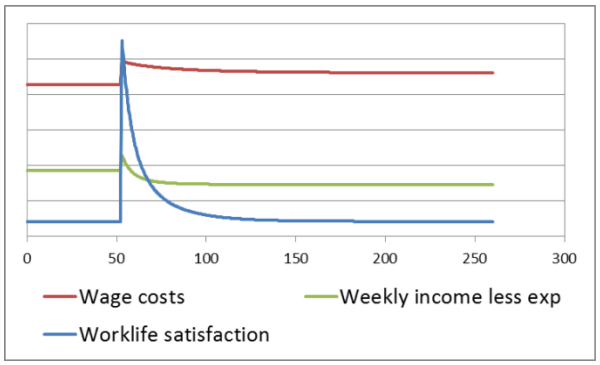

Figure 7a Case 3A Worklife satisfaction, wage costs and hotel performance

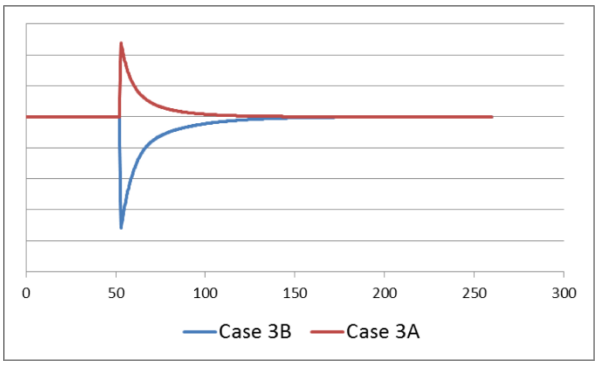

Figure 7b Case 3A & 3B Worklife satisfaction

Again revenue is impacted but only temporarily (Figure 7c) and the overall effect on hotel performance is marginally positive (Figure 7c), essentially because the lower wage costs are permanent and other effects temporary.

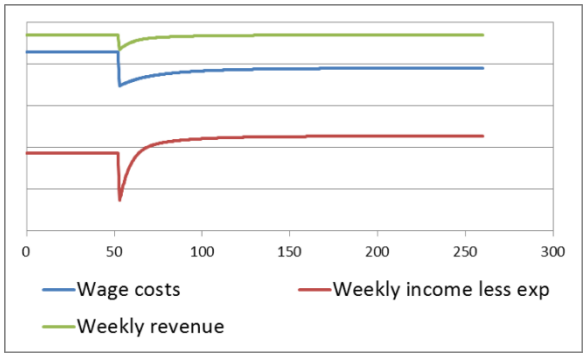

Figure 7c Case 3B Wage costs, revenue and hotel performance

These results seem counter-intuitive but that is because our mental models tend to assume the initial impact of a policy change will persist. Like all models, the intent of this one is to improve our understanding of system behaviour in light of changing circumstances.

Other cases

Several other cases have been tested using the model, including combinations of policies (e.g. combining increased payrates with reduced hours) and variations in the duration of policy changes (e.g. temporary occupancy improvements). In many of these cases, counter-intuitive behaviour is also observed.

Model validation

It is very difficult to calibrate such a model (noting that no model can be completely validated (Sterman, 2000, p. 846) because in real life there are many simultaneous changes in the environment. The model goes some way towards meeting Forrester and Senge's structure verification test (1980) as the initial behaviour of the system in response to various change is

consistent with the expectations derived from the literature. However literature has not been found that gives a high level of confidence in the longer term impacts predicted by the model. Accordingly, caution is necessary in interpreting the results set out above. At this early stage of development, the model contains assumptions about the 'strength' of cause and effect which significantly influence overall system behaviour. Nevertheless the model provides insights into the dynamic complexity of the management / employee relationship.

Conclusions and next steps

Most of the literature on worklife satisfaction and its correlates do not consider dynamics, i.e. they posit the outcome of various influences without considering how they may vary over time, nor the effects of feedback. The results of the experiments described here indicate dynamics are important in understanding the short and long term consequences of firm policy as it impacts the wellbeing of its employees. The intent is to further develop the model for use as an adaptive management tool (Figure 8), i.e. to develop and implement policies in tandem with improved information collection (data and surveys), and then respond accordingly (literally feedback).

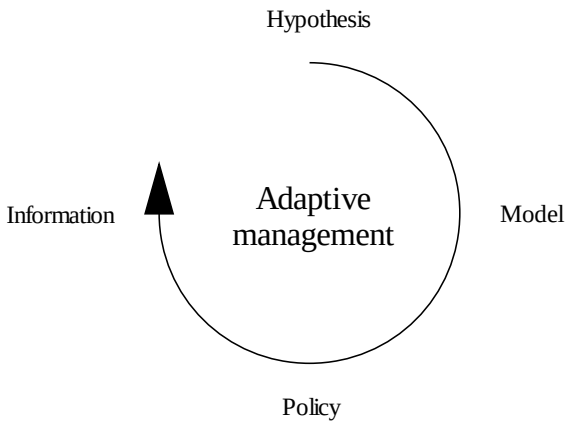

Figure 8 Adaptive management process

It is hoped that this approach will facilitate further development of the model in light of real world reference modes, with the resulting policy interventions benefitting both staff and the company.

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