Estimating the friction period in Australia: Local inputs for a societal perspective

Alison Pearce[1], Kathleen Manipis[1], Philip Haywood[1], Paul Hanly[2], Stephen Goodall[1]
[1]University of Technology Sydney, [2]National College of Ireland

Background

When someone is unable to work due to illness or injury their contribution to the economy is lost. This is known as lost productivity.

There is growing pressure worldwide for decision makers to consider societal costs such as lost productivity when evaluating new health care interventions. However, there is also debate about the best way to estimate and value lost productivity.

The friction cost approach (FCA) is one way to value lost productivity, and considers the time taken to replace an employee, known as the Friction Period. However, local macroeconomic conditions influence the Friction Period, and no estimates of the Friction Period and associated costs are available for Australia.

The objective of this study was to identify, for the first time, the time and costs of replacing an employee in Australia, accounting for worker seniority and team environment.

Methods

We conducted a survey of staff responsible for recruitment in businesses across Australia, using an online panel. Respondents considered the last employee hired at management (those with strategic responsibilities) and non-management levels, and reported workforce composition, recruitment time and costs, and team dynamics.

The Friction Period was decomposed into three periods: the recruitment decision, the recruitment period, and the training period.

Descriptive statistics of the Friction Period and the impact of an absent worker on the team environment (known as multiplier and compensation effects) were calculated.

Results

The mean time (12.3 weeks, 95% CI 9.8-14.7) & costs ($6230, 95% CI $3421-$9038) to replace a manager were higher than those to replace non-managers (10.0 weeks, 95% CI 8.4-11.7; $2666, 95% CI $1680-$3651).

The longest component of recruitment was training (managers = 4.6 weeks, non-managers = 4.0 weeks).

The Friction Period and associated costs increased with the size of the organisation (Figure 1), and when permanent roles were offered rather than casual or contract positions.

As time off work increased it:
- was more difficult to catch up on missed work;
- meant less work could be covered by other team members (Figure 2);
- increased the impact on team member productivity (Figure 3); and
- increased the probability of the absent employee being replaced temporarily.

Figure 1: Average Friction Period and costs to replace managers & non-managers

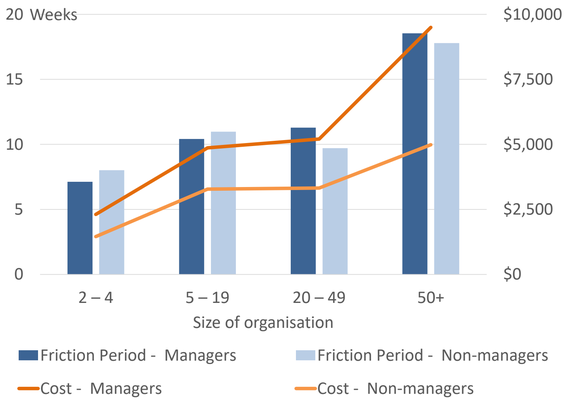


Figure 2a: When a manager is on sick leave, how much work can another employee cover in their absence?

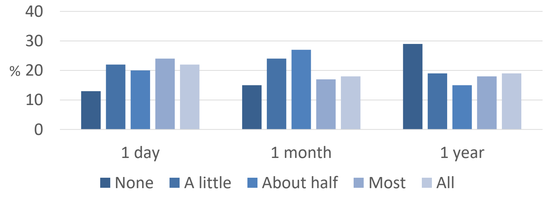


Figure 3a: When a manager is on sick leave, how much of other people's work is affected by their absence?

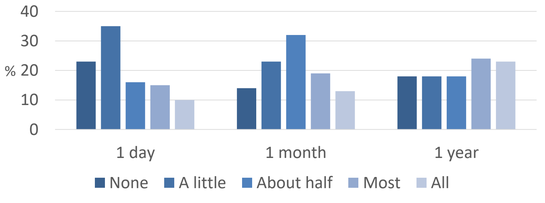


Figure 2a: When a non-manager is on sick leave, how much work can another employee cover in their absence?

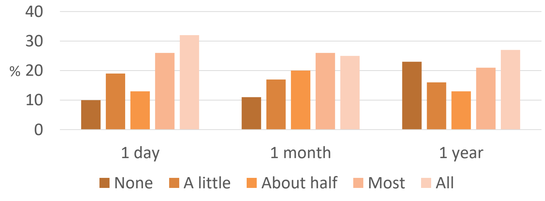
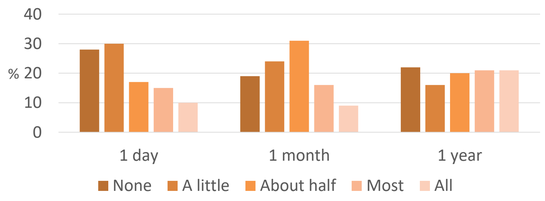


Figure 3a: When a non-manager is on sick leave, how much of other people's work is affected by their absence?



The sample

The sample (n = 409) was representative of Australian businesses - primarily small organisations (2 to 4 employees, 55%) in urban locations (74%). The business represented a range of industries and occupations, with an average of 57% non-manager positions and 43% manager level.

Conclusions

The Australian Friction Period varies (12.3 weeks for managers, 10.0 weeks for non-managers) but is generally lower than previous assumptions of three months. This has implications for economic evaluations where productivity losses of new health interventions may be overestimated.

Contacts

Alison Pearce & Kathleen Manipis
Centre for Health Economics Research and Evaluation
University of Technology Sydney
Email: Alison.pearce@chere.uts.edu.au; Kathleen.Manipis@chere.uts.edu.au
Web: www.alisonpearce.net
Twitter: @aliepea; @katmanipis