

# **A Policy Note on the Costs of Job Rotation**

Krishnamurthy Subramanian<sup>1</sup>, Prasanna Tantri, Subhendu Bhowal

## **1. The Issue**

Organizations commonly practice job rotation by which an agent is replaced before he completes an assigned task. Rotation is mandated among boards of directors, foreign service officers and bureaucrats, doctors in emergency care, house committees in the U.S. Congress, cabinet ministers, and corporate loan officers. As well, in close to thirty countries, partners of an audit firm have to rotate mandatorily.

Existing research and policy discourse has focused extensively evidence on the benefits of job rotation. Three important benefits have been pointed out. First, job rotation is likely to curb corruption by reducing the possibility of collusion among employees of an organization and its external partners. For example, a government officer is more likely to accept bribes when she is reasonably sure that the bribe payer is unlikely to report the matter to the higher authorities. Such confidence is, in turn, more likely if the officer has developed a working relationship with the bribe giver. Job rotation stymies such possibilities. Second, job rotation allows an employer to know the true output that a job can generate because the employer can observe the output generated by diverse employees over a period of time. Finally, job rotation provides diverse working environments and much needed change for employees.

However, not much is known about the possible costs that job rotation can impose. In this paper, we provide evidence that job rotation can also impose costs when decision-making inside a firm is based on information, expertise or intuition that cannot be verified by others.

## **2. The Context**

We provide this evidence using unique data provided to us by a large public sector bank in India

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<sup>1</sup> Please address correspondence to:

Krishnamurthy Subramanian, Indian School of Business, Gachibowli, Hyderabad, 500032, India. Email: [Krishnamurthy\\_Subramanian@isb.edu](mailto:Krishnamurthy_Subramanian@isb.edu)

on (i) agricultural crop loans, and (ii) the loan officers that make these loans. We use agricultural crop loans for three reasons. First, agricultural lending in a developing country like India is based primarily on unrecorded information that a loan officer collects by using his social networks or through his interactions with farmers. For example, a loan officer may learn about a potential borrower's integrity through his social network. Second, because agricultural crop loans have a fixed maturity of one year, a loan officer can clearly identify loans that would straddle her tenure and that of her replacement. Finally, in Indian government owned banks, loan officers are rotated out of a branch after completing three years. Most importantly, such rotation is unrelated to performance of the loan officer. As a result, we are able to isolate the effect of job rotation and separate it from other confounding factors that influence performance.

### **3. Main Thesis**

Job rotation creates a situation where two agents - incumbent and successor - need to be incentivized simultaneously. This engenders moral hazard. Specifically, first, knowing that the outcome of his action will be revealed only during the tenure of his successor, the incumbent will shirk because it will be hard to attribute to him the bad outcome of his action. Second, the successor may shirk because the principal cannot attribute the responsibility to him either when hard information is unavailable. As a result, both will shirk, thereby hurting performance.

In the context of a bank, with respect to loans that are handled by two officers, it is not possible for the bank to assign individual responsibility. In other words, if such a loan fails, the bank cannot apportion the blame (or reward in case of success) between the two officers as the loan might have failed either due to poor screening or due to poor monitoring and collection efforts. Therefore, the outgoing loan officer may reduce effort in screening as rotation becomes imminent because he knows fully well that the outcome of the loan will be revealed only during the tenure of the new officer. The new officer may also exert lower effort on the loans he inherits as he knows that he can always blame his predecessor. Therefore, loans affected by job rotation are likely to exhibit worse performance than loans that are not affected by job rotation.

### **4. Key results**

1. We estimate that job rotation increases the probability of default by at least 12.3%. After

completing 24 months in a branch, a loan officer is likely to believe that he is expected to be rotated out of the branch within next one year. Given that the loan tenure is 12 months, loans lent after 24 months of tenure of an officer are likely to be impacted by the costs of rotation that we point out above. In figure 1, we plot the probability of default on a loan as a function of the number of months spent by the loan officer in a branch at the time when that loan gets sanctioned (tenure hereafter). In both the panels, the vertical axis represents the probability of default and the horizontal axis represents the tenure. In the panel on the right, we depict the probability of default after accounting for various confounding factors specific to a branch, a year or a loan officer. In both panels, we observe that the probability of default decreases at the beginning of a loan officer's tenure, which is possibly due to learning by the loan officer. However, beyond 24 months of tenure, the probability of default increases continuously with the tenure of the officer

2. The outgoing loan officer ensures that borrowers who obtain loans just before rotation are similar to other borrowers with respect to attributes that are verifiable by the bank. The most important attribute in this regard is the past default history.

3. The deterioration in loan performance is disproportionately more for new borrowers than for repeat borrowers. The bank is unlikely to have any information - verifiable or non-verifiable - about new borrowers. Therefore, the damaging effect of job rotation manifests disproportionately for new borrowers than old borrowers.

Finally, we find that the incoming loan officer discriminates between borrowers who borrowed their previous loan during the tenure of the outgoing loan officer and those who borrowed their previous loan during her tenure: borrowers in the former group have less chance of being given a new loan when compared to borrowers in the latter group. This evidence suggests that the incoming loan officer anticipates lack of (screening) effort on the part of the previous loan officer.

## **5. Proposed solutions**

### ***A. Randomize Timing of Rotation***

The loan officer's ability to accurately estimate the possible timing of his rotation leads to

shirking. Hence, the above problem can be significantly addressed if the timing of rotation is randomized. However, it is important to fix a minimum tenure in order to avoid other distortions such as those caused by disruption in learning on the job.

### ***B. Develop Hard Information***

A second cause of the problem is the unavailability of documented information about the potential borrowers and hence reliance on proprietary information possessed by the individual loan officers. The problem can be tackled if verifiable information about agricultural borrowers can be collected and made available to banks.

## **6. Critique of the Proposed Solution**

We believe that randomizing rotation and building verifiable information are likely to address the problem of shirking created by job rotation. However, these measures may also lead to some side effects. First, randomized rotation may lead to increased personal costs for the loan officer and hence impact their motivation levels. Such rotations may disrupt a loan officer's plans with respect to critical personal issues such as children's education, spouse's employment, etc. As well, the agency in charge of collecting verifiable information from the farmers may not be able to extract correct and updated information.

## **7. Conclusion**

We show that job rotation leads to costs that have not yet been investigated in the literature. In particular, the costs we highlight stem when decision-making inside a firm is driven by non-verifiable information because the bank finds it difficult to fix sole responsibility when a task is undertaken by multiple loan officers. Innovative firms, which have dominated economic activity over the last two decades, rely primarily on non-verifiable actions. Therefore, based on the evidence we provide in this paper, we conjecture that job rotation would be less common in innovative firms than in traditional firms that rely primarily on brick-and-mortar assets. Thus, a fruitful area for further investigation would be to examine how the net effect of job rotation varies with the structure of information employed for decision-making in a firm.

Figure 1: Default rates based on loan officer tenure

