Pre-Analysis Plan: The exit-voice trade-off and the decline of public services*

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1   Introduction

Tests of Albert Hirschman's (1970) famous exit-voice model are voluminous (Dowding, John, Thanos and Vugt, 2000), but the subset that addresses the quality of public services and citizen reactions is still relatively small (John, 2016). But Hirschman was critically interested in how the public reacted to service quality, as in his original case of the nationalised rail service in Nigeria, and how citizen activism can keep public officials on their toes and where exit options could undermine this route to efficiency. Even though Hirchman's idea has been heavily cited in the literature in public management, there have been relatively few applications to the study of public services that move beyond metaphor and case study (John, 2016). The main exception to the lack of interest has been in studies of urban services, in particular survey work on local public services, satisfaction and citizen choice (Sharp, 1984*a,b*, Lyons and Lowery, 1986, 1989, DeHoog, Lowery and Lyons, 1990, Lyons, Lowery and DeHoog, 1992), much of it from the 1980s and 1990s, as well as more recent sectoral studies (e.g. Egger de Campo, 2007), and assessments of providing information about poor service performance on citizen voice (James and Moseley, 2014) as well as exit-voice intentions of public employees (Whitford and Lee, 2014).

Even though the evidence base is increasing and students of public services are regaining their interest in Hirschman, the quality of evidence for the exit-voice trade-off, and assessments of what kinds of mechanisms and contexts are driving it, remain observational. Apart from case studies, survey-based investigations have asked questions about exit and voice and looked for the negative relationship between the two. Such evidence is suggestive, but of

course such results may be explained by self-selection, post-hoc reasoning, or be caused by some unobserved underlying factor. Panel data, such as that used by Dowding and John (2012), is an improvement on one-shot investigationa, but is not an optimal solution to this problem. Experiments have a number of well known advantages in testing for causal relationships where intentions to behave and behaviours can be manipulated, which have recently been extended to public management settings (James, Jilke and Ryzin, 2017). Thus this project is the first experimental test of the Hirchman's exit-voice hypothesis in public administration.

2 Theory

Hirschman starts from the idea of the loyal consumer who is content to consume services and in general does not wish to complain. Routine plays a role as does regular interactions with other service givers. Although writing in a period before behavioural economics became mainstream, Hirchman's consumer conforms to an information-economising individual who likes to use short-cuts. The individual will not assess her or his actions unless forced to. Like with conventional behavioural economics, costs and benefits are important, but psychological processes mediate perceptions of these costs. Important is a threshold effect, whereby small amount of poor performance does not affect citizen satisfaction, but a major decline in quality is in time noticed, especially when it look like being permanent. The consumer, particularly the alert one, then has to think what to do.

The mix of cost-benefit and psychological considerations inform the next stage, which is the consideration of voice as a response to get things right. Dissatisfaction is a key experience for the Hirschman consumer, something they wish to address in their actions and need to confront. In this world, the loyal consumer prefers to use voice because it is seen as more appropriate as well as more convenient, with the intention of getting the service back on track. They will use voice first before considering the alternative of exit (Hirschman, 1970, p.37).

Voice is not static, but can be affected by context. One factor is the extent to which the respondents think their voice has been responded to by the organisation, which emerge over time as a consumer waits for a complaint to be replied to, for example. Another is the extent to which exit opportunities exist. This is the core of the Exit, Voice and Loyalty (EVL) model, addressing the claim that switching products is the basis of market competition and efficiency. Pure exit does not always exist because of the lack of competition and alternatives, so the question because how this variation in alternatives affects citizen or consumer choice to use the more useful and constructive form of citizen reaction for the organisation, which is voice, which is also a route to greater efficiency. The availably of exit reduces the costs of getting a good service and places a reasonable alternative for the consumer, so the greater the possibility of exit, the less likely the citizen is to voice.

In it is simplified and pure form, lack of exit, such as in the Nigerian rail example which precipitated Hirschman's interest in the exit-voice model, generates voice as the only realistic option for the consumer or citizen: 'The voice option is the only way in which dissatisfied consumers or members can react when the exit option is not available' (Hirschman, 1970, p.33), which he compares to classic monopolies of family, state or church. This generates

the expectation that when choice is limited voice is encouraged, and when choice expands so voice declines.

In other parts of the book, as so often with Hirschman, he makes his approach more subtle and argues there can be a positive interaction between exit and voice. Consumers or citizens might use exit constructively to threaten voice in which case they need some degree of exit in the first place. As Hirschman writes, 'the role of voice would increase as the opportunities for exit decline, up to the point where, with exit whole unavailable, voice must carry the whole burden of alerting management to its failings (Hirschman, 1970, p. 34). In other words, the consumer or citizen has less incentive to voice when there is no possibility of exit and it can't be threatened.

As argued by Dowding and John (2012), voice is itself a complex act which encompasses individual actions that the individual does not need cooperation to carry out and more collective acts where such cooperation is needed. As the latter is subject to the collective action problem, it follows that exit is more attractive in comparison. This requires the idea that collective voice more expensive as requires working with others, the same kind of difference at all levels of competition.

In the work of Hirschman, individual psychology is limited and moderators are not discussed, but the theory does in part work with in the world of perceived reactions and not strictly within rational actor models. Loyalty itself is more of a psychological disposition, affected by habit, routines, and lack of willingness to change, and a liking of the people who in an organisation a person is being loyal to. The Exit, Voice, Loyalty and Neglect (EVLN) model was an attempt to introduce a more psychologically grounded model of individual reaction to decline (Lyons, Lowery and DeHoog, 1992), which drew on the work of Caryl Rusbelt (Rusbult, 1980, Rusbult, Farrell, Rogers and Mainous, 1988). A further extension might see the extent of loyalty which mediates between exit and voice as something which might be the function of personality and or past experience. Prior experience of switching brands may lead to greater exit and less voice than those who are more loyal.

Finally, it is important to see the relationship between exit and voice in dynamic perspective, in that service decline is an event which the individual must process on the basis of their priors, then individuals take choices on the basis of the continuing experience. In this world, the organisation is not passive but can feedback to the individual so long as this is done credibly. Such feedback can reduce dissatisfaction, and reduce exit too.

3   Hypotheses

We have designed an experiment to test for contrasts between no choice, limited choice and more extensive choice, to capture the nuances in Hirschman's writing. There are three treatment groups that create T1 =only their own GP (no choice), T2 = choice of own plus one other, and T=3 choice of own and others. T1 captures the idea that in some situations there is no choice, which means consumers or citizens cannot use the exit option as leverage for voice, and also have no exit option to respond to dissatisfaction.

The first hypothesis, however, represents the basic exit-voice relationship which extends from a high degree of choice (T3) to pure monopoly (T1).

Hypothesis 1 *When experiencing service failure, respondents will voice to the extent they*

experience lack of choice (simplified Hirschman) T1>T2>T3

The second hypothesis introduces the idea that some voice can help exit even at more extreme levels exit reduces voice, part of Hirschman's more subtle approach, as discussed earlier. Here no choice (T1) might reduce voice compared to some choice, even though more choice (T3) reduces voice compared to some choice (T2). This is because voice is a substitute for exit when exit is less available, but not in the extreme case when there is no choice as voice will be seen as ineffective unless there is at least some potential exit which pressures providers into responding. In this way, , with a positive relationship between exit and voice when moving to no choice (T2 to T1) and negative when moving from some choice to more choice (T2 to T3).

Hypothesis 2 *When experiencing service failure, respondents with no choice will voice less than those who have limited choice, while respondents who experience a wider range of choices will voice less than those who have limited choice (full Hirschman) T1<T2>T3*

In the next hypothesis, we introduce the difference between collective and individual voice.

Hypothesis 3 *The reduction in voice in response to exit options is greater for collective voice (with other patients) than individual voice in all conditions (except for T1 comparison with T2 in H2)*

In the next hypothesis, greater loyalty in years reduces size of all differences between groups in all comparisons, even when the exit and voice are being complementary as in Hypothesis 2. Greater general loyalty to service providers in other contexts is also reflected in lower switching behaviour reduces size of all differences between groups in all comparisons).

Hypothesis 4 —
A: Prior length of time with an actual GP (loyalty) reduces the effect of the choice option on voice (as a moderator in H1 and H2).
B: Lower switching behaviour in other contexts (general loyalty) reduces the effect of the choice option on voice (as a moderator in H1 and H2)

We introduce perceived efficacy of individual and collective voice, which according to Hirschman is influenced by the amount of exit available. More exit options are perceived as creating greater competitive pressure on providers to respond to voice, so this pressure increases perceptions of voice efficacy

Hypothesis 5 *The perceived effectiveness of voice will increase the greater the exit options that are available T1<T2<T3*

There is a second randomisation toward the end of the survey, which is R1, no response from GP, with R2 as a response from GP, which tests responsiveness after voice or not voicing following a decline in service quality.

Hypothesis 6 *If there is a response to the service failure by the GP then satisfaction at the end of the scenario is higher than if there is no response R2>R1*

This intervention will have a moderator, one about the effect of voice on the change in satisfaction.

Hypothesis 7 *As a moderator of H6, the difference in satisfaction will be greater for those participants that voiced (in any form) compared to those that did not voice.*

There is an impact on exit as well from being responded to as this option is not needed.

Hypothesis 8 *If there is a response to the service failure by the GP then exit is lower than if there is no response R1<R2 (for those in T2 and T3 only)*

Hypothesis 9 *As a moderator of H8, the difference in exit will be greater for those participants that voiced compared to those that did not voice (for those in T2 and T3 only)*

4 Study Design and Randomisation

The study is a survey experiment implemented by Survation, using the survey banks of partner companies to recruit subjects. Subjects are allocated to a quota to ensure representativeness across the UK. The study will be carried out in July 2018, with recruitment happening after registration. Respondents are invited to participate into the survey, to consent to the research; then they fill out demographic questions. For the experiment they will be exposed to the scenarios of their GP surgery compared to choice or no choices. The experimental conditions represented in maps with the location of their surgery as the reference point, with T1 having no choice of another surgery, T2 which has one other doctor's surgery nearby, and T3 which has five other choices, which inform the hypotheses as set out above. Respondents who go too slowly or speedily in the first questions will be excluded before randomisation.

5 Analysis and Estimator

As the response voice variables are ten-point interval scales, we will use two-sided t-tests to appraise comparisons between the groups. Regression (OLS) will also be used to test for experimental differences, using one of the experimental groups as a baseline (T1 for Hypothesis 1 and T2 for Hypothesis 2). Additional models will apply the covariates of region, sex, age, education, household size, employment status (full time versus other), band of household income, education (scale or binary variables), ethnicity (white/non-white). Contextual information about the quality and availability of choice in local areas will be used drawing on high level aggregation postcode data (not full postcode data).

6 Power

Sample size is set by the level of funding at 1,500 and our decision to test three groups of no choice, limited choice, and extended choice, which allow for the testing of the hypotheses. This design creates three equal-sized groups of 500 each and comparisons will be made between the groups. With power set at 80 per cent and performing two-sided tests at p=.05, and a scale of 1-10 where we assume the comparison point is at 5, the mid-point, the study has the ability to detect a difference of 0.1774 between each of the experimental groups.[1] We do not have strong priors as to effect size and much depends on the salience of the scenario which we do not know in advance. The sample size overall compares well to other survey experiments, so we are confident we have a fair test of the hypotheses.

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[1]Stata code: power twomeans 5, power(0.8) n(1000)

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