

National Service and Nation Building in Singapore

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Executive Summary:

- Singapore's National Service (NS) is widely held to play a key nation building role and constitute an important component of the national identity. The program, however, entails significant direct and indirect costs. These have prompted discussions about significant modifications to the scope of the program.
- Effective policy decisions about potential modifications to NS require a clear understanding of its effects. The nature of the program, however, presents problems for conventional approaches to program evaluation. This project uses innovative techniques to overcome these constraints and generate insights into the efficacy of NS. It finds strong evidence that NS has the potential to profoundly shape identity in a manner that can bridge social divisions.
- The effects of NS, however, are highly conditional. Its potential is strongest in instances where it removes conscripts from their private spheres and immerses them in a controlled environment that amplifies the effects of socialization and contact, the two mechanisms through which NS effects change. This has strong implications for the proposed modifications. While altering the scope of NS may produce some tangential benefits, new variants are unlikely to have the same transformative potential as the current program unless they replicate its immersive environment.

Introduction

Singapore's National Service (NS) holds a special place in the country's collective psyche. It is without question widely viewed as an important component of Singaporean identity and as central to both past and ongoing nation building efforts. As it approaches its 50th year of operation, however, it is also increasingly the subject of intense questioning. Among the most visible of these include whether females should be allowed (or even compelled) to serve in greater numbers, whether NS could be shortened significantly to reduce the burden on conscripts, and whether an alternate variant of NS focusing on social – rather than military – service might be feasible.

Formulating appropriate policy responses to these questions requires that its current efficacy be clearly understood. From a methodological perspective, this is a surprisingly difficult task, and there is reason to be circumspect about existing findings. This analysis, based on a more extensive study (Ostwald 2013), has two related aims. The first is to offer a robust analysis of whether NS has the transformative effect that is often ascribed to it. I find strong evidence that NS has had a significant and durable effect in shaping identities, specifically by strengthening a civic national identity and reducing the divisive potential of ethno-cultural identities in matters of public significance. The second aim is to establish *how* NS shapes conscripts, as understanding the mechanisms function allows us to make inferences about the potential impact of the proposed changes to NS. Given the importance of NS to the nation building effort in Singapore – as well as to countries around the region with similar programs – the stakes for reforms are high.¹

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1. National Service

Singapore's National Service was instituted in 1967 as one of the first major acts of the newly independent government. Its creation addressed dual needs. First, its conscription-based model was to increase Singapore's defensive capacities without placing excessive strain on the state's meager coffers. Second, it was to serve a nation building function by bringing together Singapore's diverse population and inculcating in it civic ideals and loyalty to the new nation (Singapore MID 1967).ⁱⁱ The *Enlistment Act* of 1970 expanded conscription to all male citizens. The full-time service period has ranged from two to two-and-a-half years, with reservist liabilities that now extend to the age of 40 for non-officers and 50 for officers. While a large majority of conscripts complete their National Service in the Singapore Armed Forces (SAF), a portion have been conscripted into the Singapore Police Force (SPF) and Singapore Civil Defense Force (SCDF) since the mid-1970s.

National service has long been termed a "school for the nation" for its ability to transform identities *en masse*. Its effects are excerpted primarily through two mechanisms: *socialization* and *contact*. Socialization involves the transmission of norms and values. In the case of Singapore's NS, these include loyalty to the nation and an emphasis on collective—rather than individual—identity. Contact involves bringing individuals from different groups together under controlled conditions to reduce prejudice by dispelling generalizations about the 'other' (Allport 1954; Pettigrew 1998). Given that national service may involve removing individuals from their usual surroundings and comprehensively controlling the environment in which they interact, it has a particularly strong potential to transform identities relative to other policy areas like employment, education, or housing (in which individuals maintain their private spheres).

2. Research design and measurement strategy

Has the nation building component of Singapore's National Service been effective at building a unifying civic identity and reducing the potentially divisive elements of ethno-cultural identities among those who have completed the program? This question is surprisingly difficult to answer for two reasons. First, it is difficult to isolate the effects of NS from the many other factors that also impact identity, particularly because Singapore's policy of universal male conscription leaves no control group to compare those who have completed NS against.ⁱⁱⁱ Second, it is difficult to accurately measure identity, which complicates efforts to determine whether NS has effectively changed it. This is especially the case in environments like Singapore's where populations have been socialized to respond to sensitive questions in particular ways, making it difficult to capture underlying sentiments.^{iv} In short, a well-established body of research suggests that we should be cautious about measuring the outcomes of NS in a direct manner.

The methodological approach I take in this project offers solutions to both of those constraints. I isolate the effects of NS by exploiting variation in its intensity. The NS experience can be roughly broken into two types. The first is in so-called 'stay-in' units, where conscripts live on base for the vast majority of their NS period. The second is in 'stay-out' units, where conscripts complete NS much like a full-time job, working on base but living at home. Conscripts from stay-in units receive on average far-greater exposure to the socialization and contact mechanisms (through which NS exerts its effects) than do conscripts from stay-out units. In other words, if we thought of NS as a pill designed to alter identity, conscripts from stay-in units receive a significantly greater dosage than their colleagues from stay-out units.

Unit assignment is based largely on the results of a health screening that occurs prior to conscription.^v Conscripts who pass a threshold proceed to a Basic Military Training (BMT) geared towards combat skills. The majority of these conscripts are assigned to combat units, which are typically stay-in. Conscripts who score poorly in the health screening go to BMT geared towards combat-support or service skills. The majority of these conscripts are assigned to non-combat vocations ranging from medics to logistics and administration.

Importantly, the unit assignment process is functionally independent of the outcome of interest (identity), which gives us a natural experiment that can isolate the causal effects of NS. Returning to the pill analogy, it is *as if* two pills of different dosages were randomly distributed to conscripts. By examining whether those who received the greater dosage (stay-in unit) are systematically different from those who received the smaller dosage (stay-out unit), we can conclusively isolate the effect of National Service.^{vi}

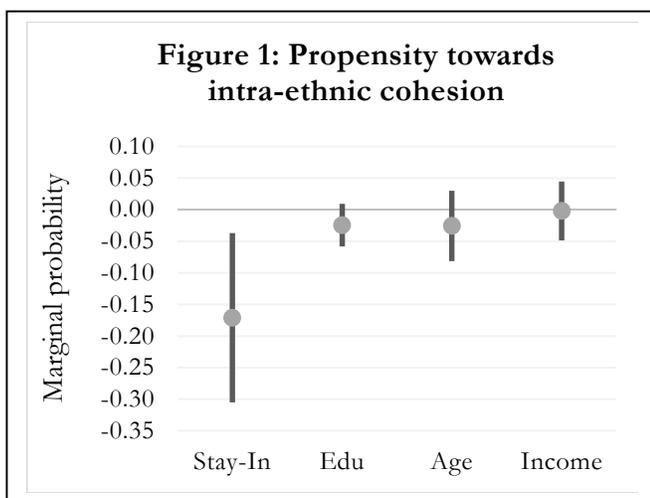
I overcome the measurement problems by relying on experiments and indirect proxy measures of identity that capture the behavioral and attitudinal manifestations of identity. This minimizes the risk of social desirability bias. The data come from a survey of randomly selected males in Singapore who have completed NS, conducted in 2012 and 2013.^{vii}

3. Findings

I rely on two tests to determine whether NS has had a strong nation building effect. Both tests can be seen as measuring unique and important elements of the nation building process, and both were constructed to minimize the risk of measurement bias.^{viii} The underlying hypothesis is the same for each test: if the nation building component of NS is effective, we should see a clear difference between respondents from stay-in units relative to those from stay-out units, given that the former received a larger ‘dosage’ of the NS treatment.

3.1 Intra-ethnic cohesion

Does NS reduce the propensity towards *intra-ethnic* cohesion? In other words, does it reduce the tendency of individuals to ‘close ranks’ within their own ethnic group in matters of public and political significance? Figure one below shows the results of this analysis, which illustrates the independent effects of NS unit-type (stay-in vs. stay-out), educational attainment (in years), age (in decades), and income (on a scale of 1 to 8) on the likelihood of advocating intra-ethnic cohesion.^{ix} The y-axis (vertical) can be read as the independent effect (in percentage) of each factor: respondents from stay-in units were on average *17% less likely* than respondents from stay-out units to advocate ethnic cohesion; every additional year of education reduced the likelihood by about 2.5%; every additional decade of age reduced it about 2.5%; and income had no effect. The bands above and below the points are 90% confidence intervals. These indicate the likely range of the population as a whole, given the data from our respondents.



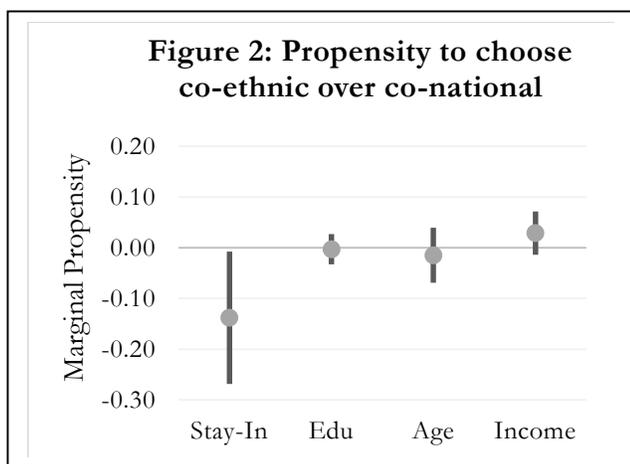
How do we interpret this analysis? First, we have strong evidence that NS has a profound effect on identity. Conscripts from stay-in units are roughly 17% less likely to advocate intra-ethnic cohesion than their colleagues from stay-out units. The only other attribute that comes close to having a statistically significant effect is educational attainment at roughly 2.5% per additional year of education; moving from a secondary school education to a BA reduces the likelihood of advocating intra-ethnic cohesion by roughly 12%. Since what we measure is the difference between a high dose of NS (stay-in) and a low dose (stay-out), rather than a high dose and no dose, the total effect of NS is likely to be even larger than what we measure.

The second key finding is that NS has a roughly comparable effect on conscripts from all ethnic groups. The third key finding is that the effects of NS are highly durable; the average age of respondents in this analysis is roughly 40 years old, which means that for most respondents we are capturing the effects of NS many years after the period of full-time service.^x

3.2 – Ethnic vs. Civic identities

The second test examines the relative importance of ethnic identity relative to civic Singaporean identity. If NS is effective in inculcating loyalty towards the Singaporean nation, we would expect that, on average, respondents from stay-in units gravitate more strongly towards a (non-ethnic) civic Singaporean identity than do respondents from stay-out units.

I test this through a fictional scenario that asks respondents to imagine that their neighbor moves away. They are then shown a series of families and asked which they might prefer to have as their new neighbors. The first several options are non-contentious (for example, between a family from England and a Thai family), after which respondents receive a potentially more difficult choice between a co-ethnic family from Johor in Malaysia (with whom they likely share ethno-cultural attributes like mother tongue, religion, and physical appearance) and a non-co-ethnic family from Singapore (with whom they share the civic Singaporean identity).^{xi} I test whether respondents from stay-in units have a relatively lower propensity to choose the co-ethnic family from Malaysia over the non-co-ethnic family from Singapore.



We again see that NS has a very strong effect; respondents from stay-in units are roughly 14% less likely to choose the co-ethnic family from Malaysia over a Singaporean family from a different ethnic group. Education has no independent effect on this tendency, and age is also insignificant. Interestingly, higher rates of income seem to increase the tendency towards selecting the Malaysian co-ethnic neighbor, though the effect just misses conventional levels of statistical significance. As in the first test, NS appears to have a comparable effect on conscripts from all ethnic groups, and we again do not see any indications of the NS effect diminishing significantly over time.

4. Implications

The two tests provide compelling evidence that NS has the potential to profoundly shape identity, particularly to strengthen a unifying civic identity while reducing the divisive tendencies of ethnocultural differences. Even when the analysis is expanded to include additional attributes like profession, family background, religiosity, and ethnicity, National Service remains one of the strongest and most reliable predictors of identity in the respondents from this study; only educational background has a roughly comparable effect on outcomes. The finding that the effects of NS do not diminish significantly even decades after the period of full-time service makes NS a nearly unparalleled policy tool for nation building.

The tests, however, also reveal the effects of NS to be highly conditional. Most importantly, there is a substantial difference in outcomes between former conscripts from stay-in units (who received intensive doses of socialization and contact) and those from stay-out units (who received far smaller doses). The implications of this are clear. The NS experience is powerful when it is fully immersive. The evidence suggests, in fact, that *on average*, stay-out unit conscripts do not experience significant changes to their attitudes toward intra- and inter-ethnic interactions. While further research is necessary to determine the precise time frame and conditions necessary for NS to produce significant transformative effects on the identity of conscripts, these initial findings have strong consequences for the policy debates currently underway. Foremost, we can be fairly confident that a conscribed version of NS which allows participants to remain in their private spheres will not have a significant transformative effect on their identities. That is not to say that shorter and less immersive variants of NS cannot

produce benefits to individuals and society, for example, by developing new skillsets or providing the social service sector with an infusion of low-cost local support. Expanding NS to new populations may also address the normative questions of distributing service burdens. The evidence suggests, however, that the significant impact NS has had on nation building in Singapore cannot automatically be scaled down without careful consideration of conditions.

5. Conclusions

The purpose of this study is to determine the efficacy of the nation building component of Singapore's National Service program. The many books, plays, and movies dedicated to it attest to the profound position it holds in the collective psyche of Singapore. Several methodological challenges, however, make it very difficult to systematically evaluate the efficacy of the program in reducing the divisive potential of ethnic diversity and fostering loyalty towards the nation. This study employs several innovative policy analysis techniques to isolate and measure the effects of the program. The evidence suggests that NS has a strong potential to bridge social divisions. This potential is conditional, however, on the type of NS; on average, NS is clearly far more effective in those instances where it removes conscripts from their private spheres and immerses them in a controlled environment that amplifies the effects of socialization and contact. While the proposed amendments to NS may produce numerous tangential effects, they are unlikely to have a profound effect on attitudes towards intra- and inter-ethnic interaction unless they adopt the immersive components present in select NS units.

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Appendix

Balance Table:

	Income	Religiosity	Educational Attainment	Age	Chinese	Malay	Indian	Total
Stay-in	4.23	1.93	4.59	41.8	54	14	13	82
Stay-out	3.99	2.03	4.37	39.7	52	20	10	83
PR(T > t)	0.40	0.52	0.50	0.30	0.85	0.30	0.53	

The balance table is used to substantiate the argument that there is no systematic bias in the unit assignment process, meaning that the selected observable attributes do not influence the assignment. The data come from the survey conducted in 2012 / 2013. Income, religiosity, and educational attainment are all on scales (income 1-8; religiosity 1-4; educational attainment 1-9). The bottom row shows the p-values of a t-test (for income, religiosity, educational attainment, and age) and a chi-square test for the number of respondents per unit type for each ethnic group. Given the sample size of $n = 165$, the p-values are not indicative of underlying bias.

Regression tables for the two tests:

Table 1: Effect of NS unit type on the propensity for intra-ethnic cohesion.

	(1) Intra-Ethnic Cohesion	(2) Intra-Ethnic Cohesion
Stay-in Unit	-0.163** (.077)	-0.171** (.079)
Age (decade)		-0.026 (.031)
Income		-0.002 (.026)
Edu Attainment (yr)		-0.024 (.018)
Observations	165	161

Logit model, Robust std err.
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 2: Effect of NS unit type on civic vs. ethnic preferences

	(1) Ethnic Preference	(2) Ethnic Preference
Stay-in Unit	-0.129* (.075)	-0.138* (.076)
Age (decade)		-0.015 (.030)
Income		.029 (.023)
Edu Attainment (yr)		-0.003 (.015)
Observations	165	161

Logit model, Robust std err.
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

In both analyses (Table 1 and Table 2), model 1 is a treatment only, while model 2 adds important controls. I use logit models with robust standard errors, as both models are run with a dichotomous dependent variable for ease of interpretation. An ordered logit model produces similar results. *Stay-in Unit* is a dummy variable coded 1 for respondents who completed NS in stay-in units (respondents from stay-out units are the reference group). *Age* is in decades (21-30; 31-40; 41-50; 51-60; 61-65). *Income* is on an 8 point scale with 8 being the highest. *Educational attainment* is in yrs of formal education. The tables display marginal effects. In other words, they display the percentage of change in the dependent variable (intra-ethnic cohesion & civic vs. ethnic preference) for each unit change in the explanatory variables. For example, in model 2 of table 1, respondents from stay-in units were 17% less likely to advocate intra-ethnic cohesion than respondents from stay-out units, when all else is held constant.

ⁱ Thailand, Malaysia, Vietnam, Cambodia, and Laos all currently have some form of national service. The Philippines and Myanmar have legal provisions for it, but do not currently exercise them. Indonesia and Timor Leste are in discussions to implement national service. In each case, the service has functions beyond building military capacity.

ⁱⁱ The Ministry of Interior and Defense (1967) pamphlet announcing the implementation of NS makes the nation building aim explicit: “The community in Singapore... is not a closely knit one. National Service will provide an opportunity for all races to come to know one another better in an environment in which they will be taught to love their Nation, to understand social obligations and develop civic mindedness and strength of character. The aim of National Service is not only to train our youths to be efficient fighting men skilled in the arts of war, but also to be good citizens imbued with the values and principles of any free, democratic and self-respecting Nation.”

ⁱⁱⁱ Using females of similar age is problematic, as more differs between males and females than just the NS experience. Using pre- and post-treatment surveys is also problematic given the long period of NS, which makes it difficult to disaggregate the effects of NS itself from the effects of natural maturation during those formative years.

^{iv} To illustrate, a direct question like “Has NS increased your loyalty to Singapore (or made you less racist, or increased your trust in group X, etc.)?” is problematic because respondents know how they are “supposed to” respond. Hence, we cannot discern between their true sentiments and their desires to provide “correct” answers, particularly when the question is posed by someone with authority or clear links with NS or the state.

^v The account I offer here is necessarily stylized given the procedural changes that have occurred over the nearly five decades of NS. While important exceptions exist in the assignment process for officers and specialists, as well as for select units in the Army, Air Force, and Navy, the assignment process I outline holds for a vast majority of SAF conscripts.

^{vi} In technical terms, this means variation in treatment intensity is exogenous to the outcome. This is because the health factors used in the unit assignment process are not systematically correlated with group identity or socio-economic status. The few exceptions to this – for example in high-sensitivity units – are not numerous enough to bias outcomes. The standard procedure for substantiating an argument like this is to show a balance table that summarizes the important attributes of both groups. I post one in an online appendix, available at www.kaiostwald.me – it does not show any indications of systematic bias in the assignment process.

^{vii} The survey is part of a larger project to identify the effects of public policy on identity in Singapore and Malaysia. To achieve a random sample, I used a stratified probability proportional to size (PPS) sampling strategy: we randomly select HDB and private estates based on their relative population sizes across five strata, then randomly select individual buildings, then proceed to collect responses by going door-to-door. Given the extensive randomization within the survey, it was mainly administered using Android tablets. I used undergraduate students from NUS, NTU, and SMU to administer the surveys, which were available in multiple languages. The survey data was supplemented by focus groups and interviews.

^{viii} The full analysis (Ostwald 2013) has an additional test that relies on an embedded experiment and a difference-in-difference research design. This test is almost fully resistant to social desirability bias and corroborates the findings from the first two tests. I do not show it here due to space constraints.

^{ix} The analysis is based on a survey question embedded into a series of questions about the cohesiveness of important social groups. I use a logit model for the analysis. Full results are available in the online appendix.

^x I test for heterogeneous treatment effects by running interaction terms, which are not significant. I test for treatment decay by using the Age variable (which is also a measure of time since NS, since virtually all conscription occurs between the ages of 16 and 19). I run additional checks including interaction terms and using decade fixed effects.

^{xi} For example, an ethnic Chinese respondent would get the option between a Chinese family from Malaysia and an Indian family from Singapore.