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# Information Dissemination in North Korea

## A Report for NGOs

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January 2022

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## ACKNOWLEDGEMENTS

We, the authors, would like to acknowledge the financial and administrative support of the National Endowment for Democracy (NED), especially the assistance of Sarah Yun. Park Dae-hyeon and his team at Woorion were essential to this project for their logistical support with survey design, focus groups, and survey implementation. We wish to thank them and the NGOs who provided feedback at the early stages of the project. The advice of Nat Kretchun, in particular, was crucial.

Viet Vu from Ryerson University provided programming and design assistance and helped build an application to support the dissemination and use of the research findings. He was an integral project collaborator.

Lastly, we wish to thank our 313 survey participants – former residents of North Korea – for their time and consideration. It is ultimately for them and their compatriots still inside North Korea that this research and related efforts are meant to assist. May North Korea one day be free.

Color palettes from the 'wesanderson' R package are used throughout this report. The altered photograph used for the cover and throughout this report is that of a market in a small village in Onchon County, South Pyongan. The photo was originally taken by Stephanie Kleine-Ahlbrandt and reused with permission.

Research for this report was approved by the Research Ethics Board at the University of Toronto (human protocol 32781).

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# 개요서

본 연구는 313 탈북민들을 상대로 진행한 컨조인트 설문조사를 바탕으로 외부정보가 북한 내에서 어떻게 사용되고 배포되는지를 분석한다. 사회적 관계와 물리적 공간을 주목하여 폐쇄적인 사회에서 어떠한 사회적 관계가 외부정보의 순환을 가능하게 하고 있는지 해명한다. 또한 시민사회와 시장 원리가 정보 확산에 미칠 수 있는 가능성과 한계를 밝힌다.

## 핵심 요약

- **북한의 정보 통제 전략은 일반적인 사회적 신뢰를 최대한으로 줄이는 데에 목적으로 둔다.** 이로 인하여 타인은 믿을 수 없고 중립적인 곳으로 볼 수 있는 야외 장소도 불법적 콘텐츠를 습득하기에는 위험하다. 이웃과 지역사회는 북한의 정보 통제 시스템의 기본적 전장인 만큼 동질집단 커뮤니티 내의 취약점은 바로 이웃사회이다.
- **가족과 친구는 믿을 수 있는 정보의 근원이자 통로이다.** 본 조사의 응답자들은 외부정보 소비에 대한 결정을 할 때 가족과 친구관계를 동일시했다. 북한 당국은 이웃 및 타인과의 관계 불신 조성과 달리 가족과 친구간의 유대는 강하게 통제하지 못한 것으로 보인다.
- **장마당에서의 외부정보 습득은 자가 또는 다른 사람들의 집보다 선호도가 낮다.** 공원이나 길거리 같은 일반적 야외 장소보다는 장마당의 선호도가 높지만 가정집이 국가의 감시 침투와 위험 요소가 가장 낮은 것으로 나타났다.
- **장마당과 상업활동에 의존하고 있는 정보유입 전략은 북한당국의 가정 외에 대한 사회 통제 정책과 그 정책의 결과를 감안해야 한다.** 무역과 시장을 통한 정보유입과 확산은 타인과의 관계에 있어 낮은 신뢰도 그리고 북한주민들의 가족과 친지관계에 대한 선호도를 감안해야 한다.
- **북한주민들의 외부 정보 교환 가능성은 가족과 친구가 가장 높고, 뒤이어 주민과 이웃, 그리고 마지막으로 타인이다.** 북한주민이 외부정보를 접할 시 가족과 친구와 정보 교환을 할 가능성은 아주 높다 (대략 75%). 타인과의 외부정보 공유는 25% 보다 낮고 주민/이웃과는 대략 50% 이다. 현재 북한 주민과 당국간의 전장은 동네 그리고 이웃이라고 볼 수 있다.
- **누구와 외부정보를 공유하는지는 정보의 근원이 영향을 미친다.** 연좌제의 위협으로 인하여 타인에게 받은 콘텐츠는 다른 타인, 친구에게 받은 콘텐츠는 친구로, 그리고 가족에서 다른 가족으로 공유될 가능성이 높아진다. 콘텐츠를 받은 사람과 같은 부류의 사람과의 공유를 선호한다.
- **북한당국의 정보통제 전략은 북한사회라는 특수함에 각색되어 있다.** 북한당국은 사회의 모든 계층과 제도를 장악하고 있다. 국가가 통제하고 있는 제도와 조직에서 존재하고 있는 공식적인 사회자본은 구조적 사회자본이 국가의 이익에 포섭될 수밖에 없다. 이런 구조적 제약으로 인해 타인과의 연계의 위험성은 높아지고 광범위한 사회적 신뢰의 형성은 저지된다.

## 결과와 의미

연구조사의 넓은 결과 외에 정보유입과 대북 콘텐츠 사업을 하는 NGO 에게 적용할 수 있는 실질적 함의들이 있다. 이런 단체들이 유의해야 할 중점은 무엇인가?

### 실행이 가능한 요소부터 시작하고 관찰한다:

- USB 가 가장 선호하는 배포 유형이기에 우선적으로 활용되어야 한다. 핸드폰과 같은 외국 기기는 선호하지 않지만 북한 핸드폰은 더욱더 선호하지 않는다. CD 나 DVD는 USB 에 비해 선호도가 약간 낮다.
- 한국이나 외국 콘텐츠, 뉴스와 같은 논픽션, 그리고 비디오를 선호한다. 한국의 생활방식에 대한 정보를 가장 선호하는 내용 중의 하나다. 북한 콘텐츠는 사용 선호도가 낮은 것으로 나타났다.

### 중요하지만 실행성이 낮은 분석결과는 다음과 같다:

- 가족과 친구가 가장 신뢰하는 외부정보 공급자다.
- 가정/집 안에서 공유하는 방법을 가장 선호한다. 야외 장소에서 공급된 정보를 가장 비선호하지만 장마당은 아직 논쟁될 만한 공간이다 – 즉, 선호하지도 않고 선호하는 것도 아닌 것으로 나타났다.

정보 보급에서 시장과 시장 행위자가 수행하는 중요한 역할을 감안할 때 이 섹션의 결론을 내리기 위해 시장 관련 결과에 대해 자세히 설명할 가치가 있다. 첫째, 우리의 연구 결과는 시장이 정보와 콘텐츠가 흐를 수 있는 잠재적으로 유용한 통로가 아니라고 말하는 것은 아니다. 다만 우리는 시장을 친구나 가족의 유대를 통해 형성된 신뢰를 기반으로 하는 공간으로 생각할 필요도 있다.

이로 인해 거래자 간, 고객과 거래자 간의 관계는 시장에서 중요한 잠재적 매개 요인이 될 수는 있으나, 거래 관계는 잘 아는 사이, 즉 친인척이나 친구가 아닌 경우, 거래 형성의 가능성은 제한적인 것으로 보인다. 북한의 외부 내용물의 소비, 거래 및 유포는 범죄 행위이며 시장은 일반적으로 더 많은 신뢰와 긴밀한 개인적 유대를 필요로 한다.

### 따라서 실질적으로 다음과 같이 조언한다:

- 도매상 간의 외부정보 유입과 유포에 집중하며 다양한 신뢰 네트워크를 가진 사람들에게 어필할 수 있는 콘텐츠에 집중한다.
- 범죄적인 요소들을 줄이기 위해 정치적 내용들은 조정하거나 재고한다.
- 북한 무역상층에게 대중적인 호소력을 지님과 함께 북한의 변화를 추구 할 수 있는 은밀한 메시지를 결합한 콘텐츠가 유통 시 제한된 친족 네트워크를 넘어설 가능성이 높다.
- 정보 유통의 성공률을 높이려면 개발된 콘텐츠를 북한으로 보내기 전에 전직 북한 도매상들 (탈북민 포함)의 피드백을 받을 수 있다.
- 북한내 기존 상업 네트워크를 활용한다.

이번 연구원들이 개발한 앱은 북한 정보 사업을 하면서 어떤 콘텐츠 그리고 어떤 배포 대상이 외국 정보 소비의 확률을 높이는지 제시한다: [https://scdenney.shinyapps.io/ned\\_conjoint\\_shiny/](https://scdenney.shinyapps.io/ned_conjoint_shiny/)

## EXECUTIVE SUMMARY

What explains foreign information use and dissemination in North Korea. Using a choice-based conjoint survey of 313 former residents of North Korea, this report explores determinants of information use and dissemination inside the country. Focusing on social relationships and physical spaces, it sheds light on the types of social relationships that enable the circulation of foreign information in an otherwise closed society. The report also highlights the promise but very real limits civil society and market forces play in the spread of information in North Korea.

**Key takeaways are as follows:**

- **North Korea's information control strategy minimizes general social trust.** Hence, strangers cannot be trusted, and supposedly neutral sites like outdoor spaces are dangerous for the acquisition of illicit content. The neighborhood remains a battleground for North Korea's social control system, and the weak link in any community of like-minded people are potentially their neighbors.
- **Friends and family are trusted sources and conduits of information dissemination.** Respondents did not distinguish between family members and their friends when making the decision to consume foreign media content. The state has seemingly not been able to co-opt and control family and friendship bonds to anywhere near the same extent as it has fomented distrust between neighbors and strangers.
- **Markets are less favored for foreign content acquisition than one's own home or the homes of others, but the least favored place is general outdoor locations.** It would seem that the market is a less well-regulated and less risky space than general outdoor spaces, like parks and the sides of streets, but the household remains the least penetrated by the state's system of surveillance.
- **Information dissemination strategies that rely on markets and commercial activities must reckon with the state's relentless drive to control all activity outside the home.** Information dissemination that seeks to spread content through markets and commerce must reckon with low levels of trust among strangers, and North Korean preference for family members and friends as a source of content.
- **North Koreans are unlikely to share information with strangers, might share with a neighbor, and are likely to share with friends and family.** If North Koreans acquire foreign information, they are highly likely to share it with friends and family (roughly 75% of the time). Less than a quarter of the time will North Koreans share information with strangers and roughly half of the time, they are willing to share with neighbors. Neighborhoods – and the neighbors who occupy them – are the battleground spaces between the individual and the state in North Korea today.
- **With whom North Koreans share information is influenced by the source.** Given the potential threat of guilt by association, content acquired from strangers is likely to go to strangers (if it is shared at all with them), friends to friends, and family to family. Respondents favored the same kind of people they received content from when making the decision to disseminate information they have already used themselves.
- **The North Korean state's information control strategies appear to be adapted to the peculiarities of North Korean society.** The North Korean state remains dominant at every level of North Korean society. Formal kinds of social capital in the form of state-controlled organizations and neighborhood level surveillance institutions ensure that structural social capital remains co-opted and subservient to state interests. Such structural circumstances preclude the emergence of widespread generalized social trust because the risks of trusting strangers are so high.

# INTRODUCTION

North Koreans, like citizens in any authoritarian country, are part of a public sphere (Dukalskis, 2017: 37–44), even if it is designed to legitimize dictatorial power, and largely uncritical of the state bureaucracy. The North Korean information environment is characterized by a remarkable degree of closedness. Yet, the country is not as closed to information as it was for much of the Cold War (Hunter, 1999: 134), with markets and social networks facilitating access to foreign media via DVDs, USBs, memory cards, other digital devices, including Chinese mobile phones (Kretchun & Kim, 2012: 12). Survey data from 2015 indicates that around 90% of the population had access to a DVD player, around 80% to USB devices, and over 60% a mobile phone. These devices and media are key vectors by which foreign audio and visual materials are acquired and disseminated (Kretchun et al., 2017: 7).

More recent surveys present similar findings of widespread digital device ownership (Cheon et al., 2019: 66, 68) and that these devices are used to consume and disseminate foreign media (Unification Media Group, 2019: 12–15). These surveys also indicate that family/friends and markets are two key sources of foreign media for consumption and distribution (Unification Media Group, 2019: 19), and North Koreans generally obtain and share foreign media only from/with family or friends (Kretchun et al., 2017: 20–21; Unification Media Group, 2019: 16–17).<sup>1</sup> At the same time, other literature indicates that South Korean culture has achieved a degree of soft power and mass appeal within North Korea (Chung, 2019; Y. Kim, 2019).

Studies using in-depth interviews with North Korean defector-migrants have explored the impact of the (South) Korean Wave and other information from the outside world on North Korea (Chung, 2019; Kang, 2014b, 2014a; Lim et al., 2014). This literature largely focuses on the impacts of foreign media consumption on individual North Koreans and the potential broader implications for North Korean society that media consumption could have.

Overall, the longer-run political implications of foreign media consumption and dissemination within North Korea are unclear, though it is commonly believed by both external observers (Baek, 2016; Lerner, 2015) and the North Korean government to be potentially politically destabilizing (Fisher, 2018b, 2018a: 153–215). Some have argued that North Korea to be closer to East Germany on the eve of unification than to China because of Pyongyang's apparent inability to control information flows. Consequently, there is a need to more clearly understand what affects the dynamics of foreign information and consumption within North Korean society (Kuhnhehn et al., 2020).

Interestingly, studies of the effects of foreign media consumption in other countries indicate that they can have counterintuitive effects on support for authoritarian regimes, with the realism of foreign media potentially tempering overly optimistic views of the outside world that circulate in some authoritarian societies (C. Choi & Jee, 2021; Huang & Yeh, 2019; Kern & Hainmueller, 2017). In the North Korean case, however, the consensus between outside observers and the regime in Pyongyang is that foreign media consumption and dissemination are dangerous to regime survival.

What is not yet properly understood is what motivates information use and dissemination in North Korea.

## METHOD

To explore the determinants of foreign information consumption and dissemination in North Korea, we ran a choice-based conjoint (J. Hainmueller et al., 2013) with 313 North Korean 'defector-migrants'<sup>2</sup> residing in South Korea.<sup>3</sup> This method is used for causal inference in a multidimensional design. It is an increasingly common instrument used in the social sciences to investigate public opinion on issues as wide-ranging as immigration (Denney & Green, 2021; Jens Hainmueller & Hopkins, 2014) and medical preferences (Al-Omari et al., 2021), and it has been used commer-

<sup>1</sup> For a broader review of the communications literature dealing with North Korea, see Seo and Nah (2020).

<sup>2</sup> This term represents those North Koreans who left their country and resettled in a new host country. It refers only to those who resettled in South Korea, in this case. This term is used without any intent to signal a political meaning or message or any kind. We believe this term is better than the alternatives and conveys the widest range of possible motivations behind leaving North Korea. It is better, in the assessment of the authors, than either 'defector' or 'migrant' alone, or any of the competing alternatives, such as 'saetomin' (new settler) or 'bukhan ital jumin' (resident who left North Korea).

<sup>3</sup> Additional information on the sample is provided in Appendix A.

cial market research for decades (Wind et al., 1989).

In the conjoint experiment, respondents are encouraged to answer as if they are still in North Korea. They are asked to evaluate two hypothetical foreign information profiles and choose among the two which they would have used in North Korea (i.e., read, listened to, or watched). They are then asked to answer whether they would have shared the chosen information profile with a stranger, neighbor, friend, and family member. Lastly, respondents are asked to evaluate on 7-point ratings scale the two profiles for use preference.

Each profile includes seven attributes with varying values. The attributes include *provider*, *acquisition place*, *distribution media*, *content subject*, *target age*, and *type*. These attributes were chosen to best approximate types of foreign content that North Koreans might encounter and how they would encounter it. Attributes and their values were generated following consultations with former residents of North Korea and various NGOs that work to provide outside information to North Koreans during the design stages of the survey.

The primary outcome variable is determined by a forced choice, binary variable for whether the respondent would *use* an information profile (1, else 0). This then determines sharing preferences, constituted by four additional dichotomous outcome variables for whether the respondent would share the information they would use with a stranger, neighbor, friend, or family member. The ratings-based use preferences are treated as robustness checks on forced-choice questions. Notably, we do not ask whether the respondent would share the information independently of using it. Rather, we ask whether they would share the information they would hypothetically use. The point here is to determine what information that North Koreans use they would subsequently share, and with whom.

**Figure 1** shows an example of the experimental design and an approximation of what the respondents saw in the survey after the introduction to the experiment. The introduction included an explanation of what each question was instructing the respondent to do.

**Table 1** presents the full list of attributes and their values. Across seven attributes with four values each, except for type (which has two), there are a possible 8,192 combinations. Each respondent is shown a total of 10 unique profiles (“tasks”). All 313 respondents

completed 10 tasks in total. Viewing two profiles per task, we have a total sample size of 6,260 ( $313 * 10 * 2$ ). For each task, the order of the attributes and each attribute level are fully randomized. This design permits us to specify the effect of attribute level on the probability of a foreign information profile being preferred for use and sharing. Varying effects of different attributes on the same scale also allows us to consider the relative importance of any given attribute level. We can, for example, consider the importance of information provided by a friend relative to information received at a market. The experiment also lets us consider possible interaction effects between attribute values, such as whether the impact of place (e.g., a market) is mediated by provider (e.g., friend vs. stranger).

Our primary focus is on people-to-people ties and the location of information acquisition. The reasons for this are twofold. First, trade in illicit commodities generally has to happen person-to-person and trust between people is crucial (Beckert & Wehinger, 2013). Second, markets are heavily reliant on trust between relative strangers (G. Choi & Storr, 2020), and trust between strangers is the basis for civil society and organizing outside the state (Stolle, 2002). Hence, we consider how person from which content is acquired and the place where sharing takes place affects the chances that people decide to share content, and how these both affect onward dissemination.



**Figure 1. The Experimental Design**

<b>1/10</b>								
Please examine the items below regarding the type and location of the content. Then, choose which of the two options you most prefer.								
	<b>Choice 1</b>				<b>Choice 2</b>			
<b>Provider</b>	Stranger				Friend			
<b>Acquisition Place</b>	One's own home				Market			
<b>Distribution Media</b>	CD/DVD				USB			
<b>Content Subject</b>	International content				South Korean content			
<b>Content Form</b>	Text				Video			
<b>Target Age</b>	19-29				30-49			
<b>Type</b>	Fiction				Non-fiction			
<b>Which of the two profiles would you most likely have consumed when in North Korea?</b>	<b>Choice 1</b> <input type="radio"/>				<b>Choice 2</b> <input type="radio"/>			
<b>Given your choice in the last question, would you share the information with the following people?</b>								
	<b>Yes</b>				<b>No</b>			
<b>Stranger</b>	<input type="radio"/>				<input type="radio"/>			
<b>Neighbor</b>	<input type="radio"/>				<input type="radio"/>			
<b>Friend</b>	<input type="radio"/>				<input type="radio"/>			
<b>Family</b>	<input type="radio"/>				<input type="radio"/>			
<b>The following is criteria for preference ratings of the information content. 1 means that you don't prefer the content at all, and 7 means that you prefer it very much. What is your preference?</b>								
<b>Choice 1</b>	1	2	3	4	5	6	7	
<b>Choice 2</b>	1	2	3	4	5	6	7	

**Table 2. Conjoint Attributes and Values**

<i>Attributes</i>	<i>Values</i>
Provider	Stranger
	Neighbor
	Friend
	Family
Acquisition Place	One's own home
	Another person's home
	Outside (park, street, etc.)
	Market
Distribution Media	North Korean phone/tablet
	CD/DVD
	USB
	Foreign device (phone etc.)
Content Subject	Not country-related
	International content
	South Korean content
	North Korean content
Content Form	Text
	Recorded file (audiobook etc.)
	Video
	Computer program or app
Target Age	Youth
	19-29
	30-49
	50+
Type	Fiction
	Non-fiction

## FINDINGS

This section reports the empirical findings from the experiment. First, we report the effect that various foreign information profiles have on the probability that information is taken up and used in North Korea. Then, we examine how those same attributes impact the likelihood that the information used would be shared. The section concludes with an examination of the open-text data on the motivations behind foreign information use.

### *Foreign information use*

**Figure 2** shows our main results. As per the statistical approach developed in Hainmueller, Hopkins, and Yamamoto (2014) and applied in Hainmueller and Hopkins (2015) as well as elsewhere (e.g., Denney and Green 2020), we estimate the average marginal components effects (AMCEs). Regressing the attribute values against the outcome variable, information use, we can estimate the average difference in the probability of any given profile being chosen for use across all of the values. Focusing on the main quantities of interest for the study here – providers and place of acquisition – we find that information coming from a friend or family member both have significant and fairly substantive effects on the probability that foreign information is used in North Korea. Relative to a stranger (the reference category), information provided by a friend increases the probability of use by 9.5%, and if information is provided by a family member the effect is similar (8.8%). In terms of acquisition place, we see that relative to information provided within one’s own home, no other location drives a greater probability of use. Information provided in general “outside” space, such as a park or in the street, is significantly less likely to motivate use (a decrease by 8.3%).

Although of less theoretical interest, the other attributes provide important insight into foreign information use. We observe that, relative to a North Korean phone or tablet, information on a USB or CD/DVD is slightly more favored (approx. 3.5% increase in probability of use). Information on a foreign device decreases the probability of use, but by less than 3%. These effects are rather small, however, and only statistically significant for the USB. Among subject material, we note specific content preference relative to the reference level (“not coun-

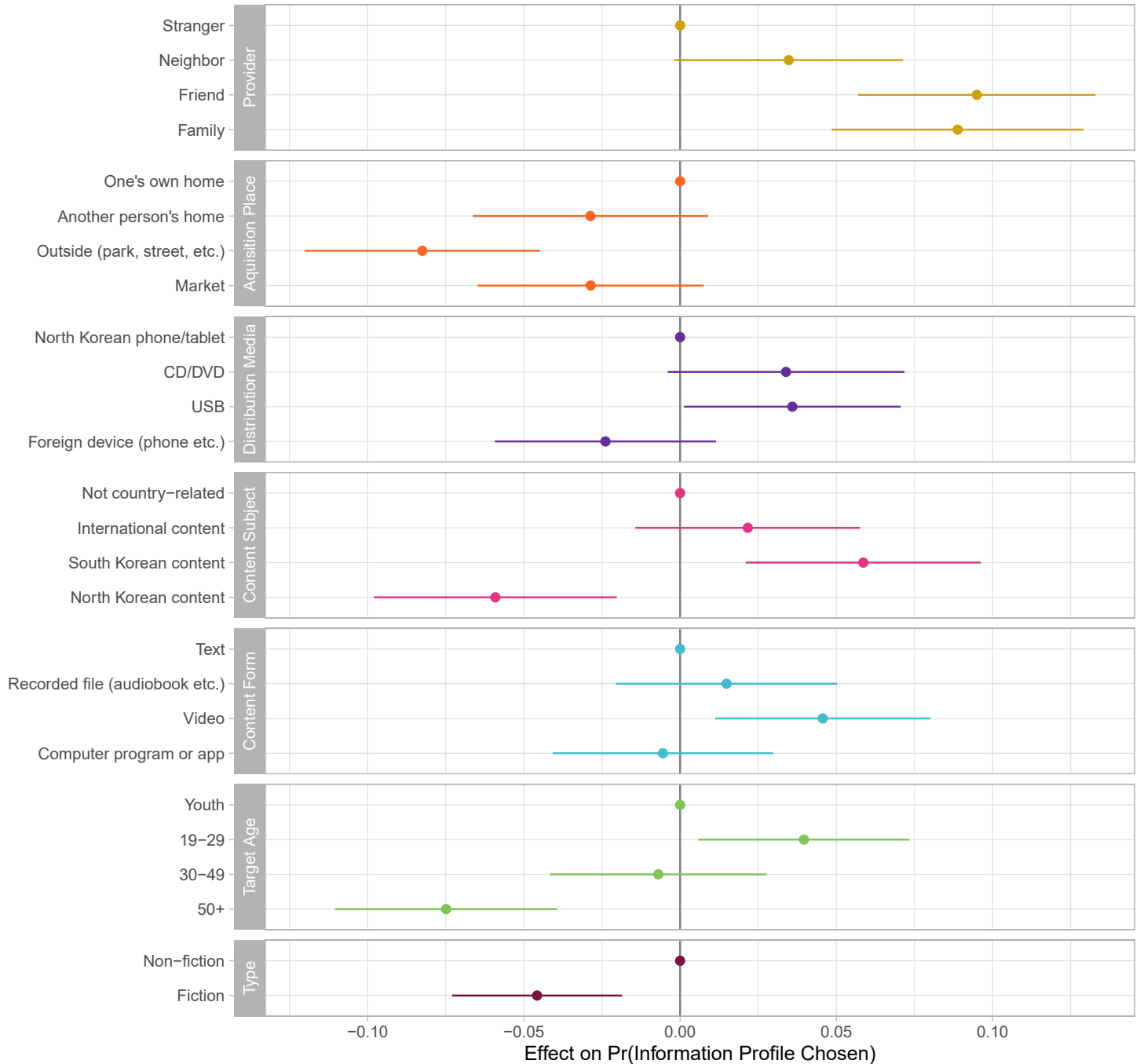
try-related”). Foreign information that contains South Korean content increases the probability of use by 5.9%, whereas information with North Korean content decreases the probability by the same amount. It is important to note here that the specific size of the effect is relative to the level it is referenced against. No country content serves as a ‘natural’ reference category, but the negative effect of the North Korean content level would be larger if referenced against the South Korean content. The takeaway here is that South Korean content is preferred over North Korean content, and indeed South Korean content is the most desired relative to other content values.

Regarding content form, we see that there is a modest preference for video over other types. There is a 4.5% increase in probability of information use relative to text. The difference between text and other content forms is insignificant. For the last two attributes – target age and information type – we see a slight preference of content targeting a 19-29 age group and a clearer disapproval of content that targets older audiences (-7.5% for information targeting 50+). As for type, we see that non-fiction is preferred over fiction. Content with fictional content is 4.6% less likely to be used.

As a robustness check on the forced-choice outcome, we also consider whether answers change substantively using the ratings-based answers. This type of answer does not force a respondent to choose between options. If two information profiles shown were both undesirable (or both preferred) respondents would have an opportunity to express that opinion. Regressing the attribute values against another dichotomous outcome variable (1 if the rating is greater than 4, else 0), the outcome is shown in Appendix B (**Figure B.1**). For space considerations we do not analyze it in this report, but the findings provide corroborating support for the choice-based analysis.

**Figure 2.**

### Effects of Foreign Information Attributes on Probability of Use



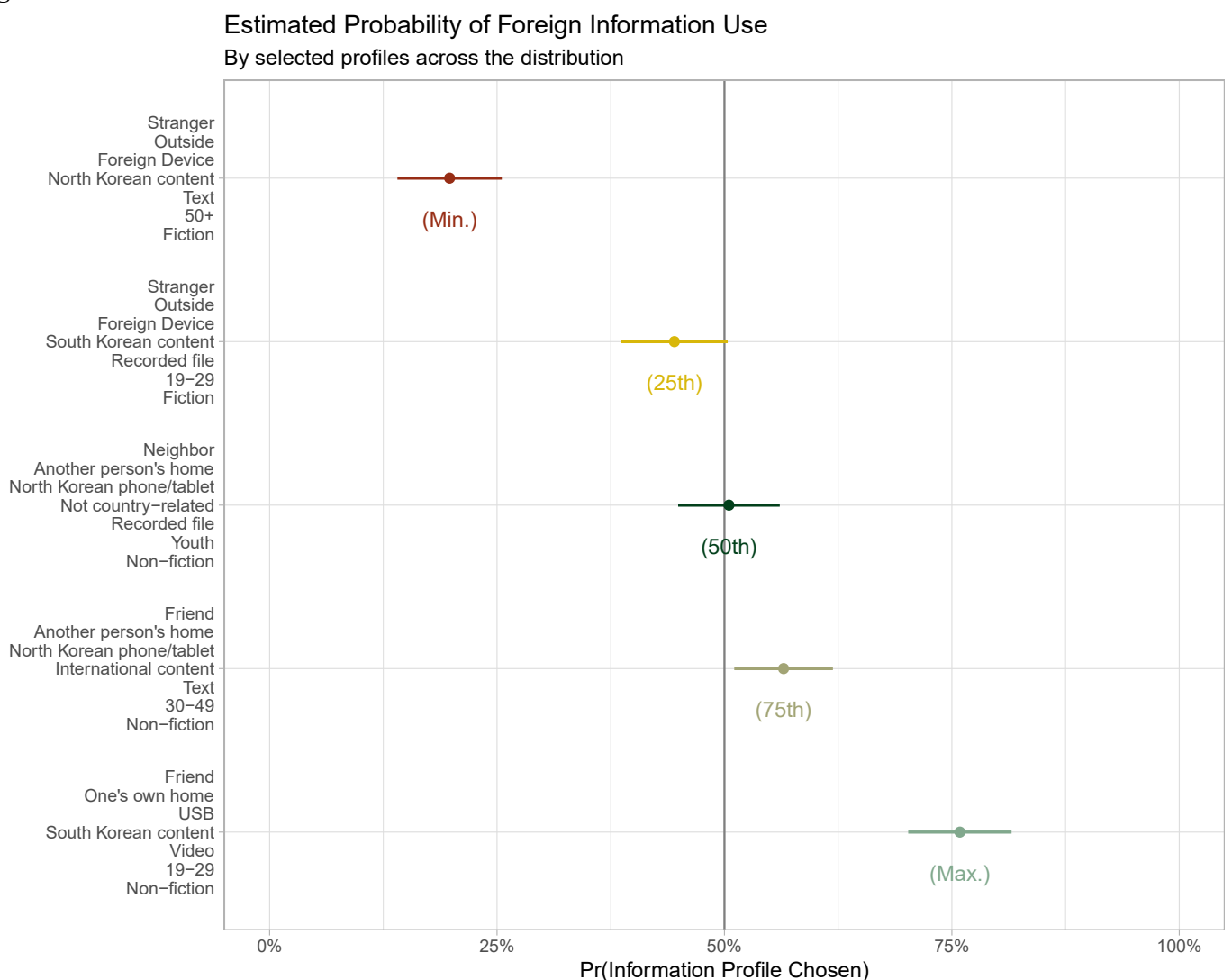
Estimates represent the effects of the randomly assigned information attribute values on the probability of the information profile being preferred for use.  
 Estimates are based on the benchmark logit model with clustered standard errors.  
 The error bars show 95% confidence intervals.

The AMCEs are good at showing the relative effects of the attribute levels on the probability that foreign information would be used in North Korea, but it does not exactly lend itself to easy interpretation or substantive meaning. To address this issue, we plot the predicted probabilities that various foreign information profiles would be used (**Figure 3**). Estimates are plotted across the distribution at the minimum, 25th, 50th, 75th, and maximum percentiles. Here we see that the minimum (i.e., least likely profile to yield information use) shows us a profile of information provided by a stranger, delivered outside on a foreign device with North Korean context in text format. It is fictional (e.g., a novel) and targets an older age group (50+). This information profile has a 20% chance of being used – in other words, unlikely.

On the other end of the distribution, we have an information profile that has a 76% chance of being used. A high success profile is information delivered by a friend in one's own home on a USB drive containing non-fictional video content about South Korea targeting a younger audience. This could be anything from a documentary to South Korean news. We should note that making this content fictional (e.g., akin to a drama, something widely understood as popular among North Koreans) would lower the probability of it being used, but not by that much.

It is worth drawing attention to the profile at the 50th percentile, where the chance of information use could go either way. In these situations, defined by information coming from neighbors and outside of one's own home, people are neither completely trustworthy nor totally untrusting. This 'battleground' space is worth unpacking, which we consider in the conclusion.

**Figure 3.**



Plot shows the predicted probability of information profiles being preferred for use. Estimates are shown for the minimum, 25th, 50th, 75th, and maximum percentiles of the distribution. The estimates are based on the benchmark logit model with clustered standard errors. The error bars show 95% confidence intervals.

As an alternative to AMCEs, we also present and analyze the marginal means. These represent the mean outcome of all attribute levels, averaged across all other levels. Each attribute level's marginal mean describes the level of favorability profiles which contain the particular level have, with a straight-forward interpretation in forced-choice two options design – such as the one in the current study. In these design cases, a marginal mean above .5 increases favorability towards profiles with the attribute level and marginal mean below .5 indicates profile decreases it. The interpretation of this outcome statistic is probabilistic. An attribute value with a marginal mean of .35 means that there is a 35% probability that the respondent would choose a profile containing that value (see Leeper, Hobolt, and Tilley, 2020).

Although AMCEs are good at estimating preferences of some feature's value relative to another feature's value (e.g., men compared to women, or fiction relative to non-fiction) marginal means convey the absolute level of favorability respondents have toward every value. This way, it is easier to examine underlying preferences per all the attribute values from the foreign information conjoint administered in this research. We report the marginal means in **Figure 4**.

Overall, the AMCE-based interpretation is supported. We see that, for the provider attribute, information profiles containing friend and family motivating profile favorability regarding information use. Stranger clearly decreases profile favorability and neighbor is contested. For the acquisition place attribute, however, the marginal means provide a more informative and nuanced read on the impact these values have on the likelihood that North Koreans use foreign information.

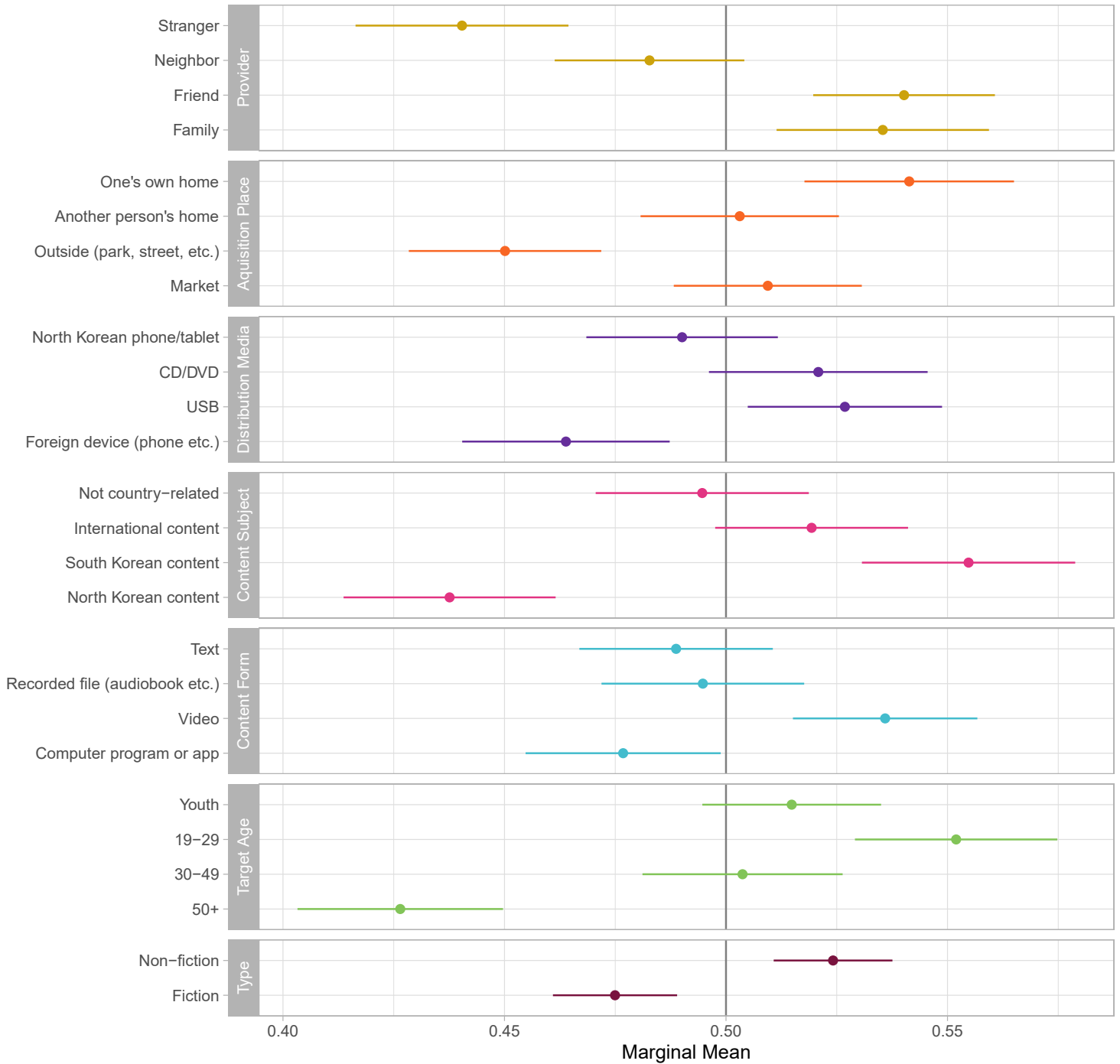
As noted above, all values relative to one's own home are less desired. But here we can see that, while one's own home makes information profiles more attractive, outside spaces and markets are not merely less preferred. Information acquired outside decreases the chance of that information being used, whereas markets and another person's home are a wash. These are, like the neighborhood spaces indicated by neighbors as providers, contested spaces. Markets lean towards spaces where North Koreans feel comfortable acquiring illicit information, but overall it is not clear (indicated by the confidence intervals overlapping the midpoint).

The findings for the other attributes are congruent with the AMCE-based findings. Respondents prefer profiles with USBs, South Korean content (and definitively not North Korean content), videos, and non-fiction content targeting younger audiences.

Additional checks on the robustness of the main findings, as they have been presented thus far, are provided in Appendix B. There, **Figures B.2-B.6** consider the conditional marginal means based on when respondents defected from North Korea, length of time in South Korea, previous market experience in North Korea, origins (borderlands vs. not), and socioeconomic standing in North Korea. There is evidence of interesting interactions between some background characteristics and information use preferences (e.g., market experience and attitudes towards markets as places of information sharing), but due to length considerations and statistical power concerns, it is not our intention to fully analyze the results.

**Figure 4.**

### Marginal Means of Foreign Information Attribute Levels



Values represent the mean outcomes of all attribute levels, averaged across all other features. Feature levels with Values greater than .5 increase profile favorability. The error bars show 95% confidence intervals.

## Open-text answers

Next, based on the 313 open text responses regarding the motivation behind choosing the information profile, we use a machine learning technique that finds abstract “topics” within qualitative and unstructured data. In this case, the open text responses. This method serves two purposes. First, it works as a robustness check on the conjoint-based analysis, helping us determine whether the open-text answers match the survey-based analysis. Second, it allows us to consider how respondents openly express their opinion regarding their motivations for foreign information use in North Korea.

**Table 4** shows the results from a three-cluster implementation of Latent Dirichlet Allocation (LDA) (Chang, 2010). Each topic contains clusters of words that were likely to co-occur among the answers provided, with the most commonly occurring words listed in ascending order. We classify the cluster topics by the meanings they convey. We note **learning** (topic 1), **trust** (topic 2), and **curiosity** (topic 3). In other words, the open text answers express a desire to learn, the importance of social trust, and a curiosity about the outside world. This is what motivates foreign information use in North Korea, according to our data.

One can see under topic 1 that words that the model groups together include learn, South, Korea, information, and inform. That is, to learn about and be informed about South Korea. The word share also indicates that people want to share what they learn – preferably with a friend, as noted in column one, row 15.

Topic 2 indicates that trust between family and possibly neighbors is the basis of foreign information circulation. Note the words trust, family, know, neighbors. Trust also enables one to some fun. We see here further evidence of the battleground that neighborhoods are. People, it would see, want to trust their neighbors, and share the information they are using. Lastly, words from topic 3 indicate that curiosity among young people from North Korea and friends motivates the use of media, such as dramas. The third topic underscores the curiosity-driven and emancipatory nature of information flows and provides some reasons why people will take risks to acquire illicit information in an authoritarian context.

	<i>Topic 1</i>	<i>Topic 2</i>	<i>Topic 3</i>
1	because	korean	north
2	korea	family	people
3	south	know	friends
4	share	trust	curiosity
5	films	fun	dramas
6	information	close	want
7	inform	media	chose
8	learn	neighbors	young
9	possible	life	many
10	shared	wanted	see
11	good	world	dont
12	come	relatives	videos
13	quickly	acquaintances	curious
14	reason	foreign	safe
15	friend	watched	experience

Based on three-cluster implementation of Latent Dirichlet Allocation (LDA)

To better illustrate the substantive meaning behind the open-text responses, we subjectively selected quotes corresponding to each topic. Regarding topic 1 (learning), two respondents had the following to say:

Because it is the only way to see and learn about the world in isolated North Korea.

Media are a way to access outside information. When I was young, I watched and listened to a lot of South Korean and other foreign films and music.

Regarding topic 2 (trust), the following rationales were provided:

There is a tendency to watch South Korean dramas and films with friends you can trust and with family because you can go to prison if caught.

North Korean media is largely unpopular, while media from South Korea and other states inspires great enthusiasm. [...] Because it is so dangerous to share with relatives or neighbors, people share with close friends.

Lastly, for topic 3 (curiosity), the following was written:

I was very curious about the ways of life in capitalist or democratic countries, which I could not see in North Korea.

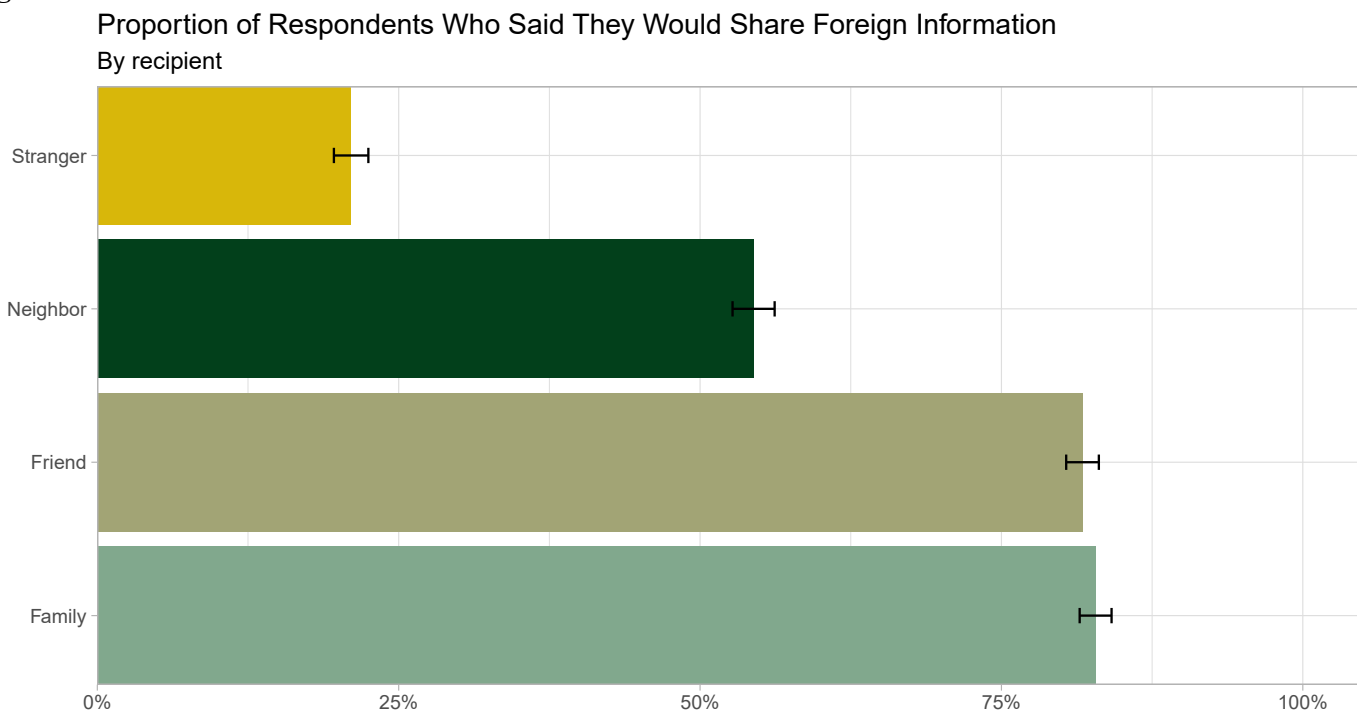


## Foreign information sharing

Having established the effects that various attribute values have on the probability of foreign information being used in North Korea, we turn now to how these same attributes affect foreign information sharing. Based on the information profile chosen for use, the survey respondents were asked to indicate whether they would share that information with a stranger, a neighbor, a friend, and a family member. Using the same statistical approach as that for information use, we now consider what determines information sharing. Before looking at the various attributes, we estab-

lish the proportion of respondents who said they would share the information they used with the specified recipients. In **Figure 5**, we see that more than three-quarters of respondents would share with a family member (83%) or a friend (82%). Sharing with a neighbor is significantly less likely, with just over half answering in the affirmative (54%). Only 21% of respondents were willing to share with a stranger. As we found for information use, the greatest amount of trust resides among friends and family.

**Figure 5.**



The error bars show 95% confidence intervals.

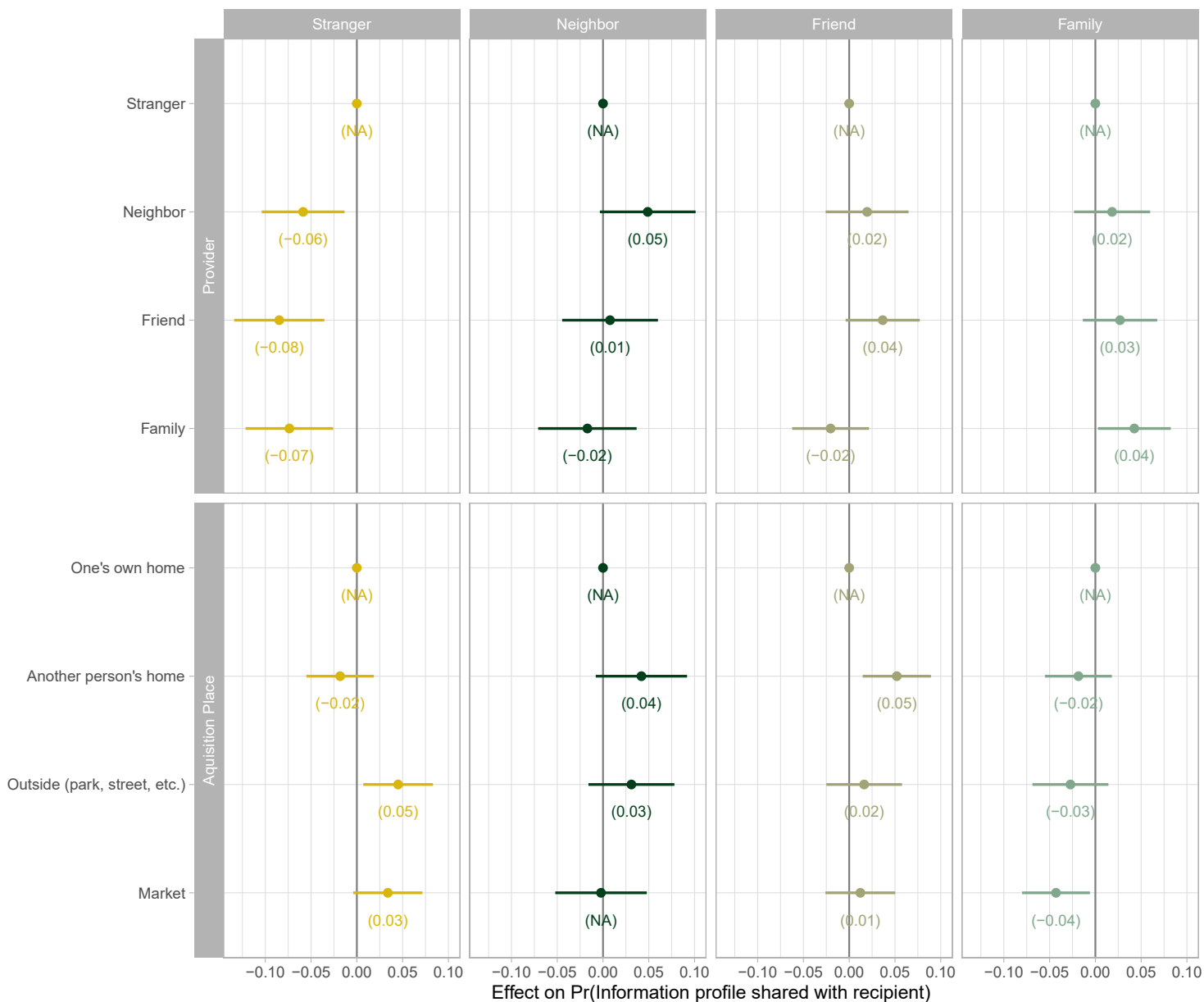
Given our design, we consider the effects of the randomly assigned information attribute values on the probability that the chosen information profile would be shared across the four target recipients. Do the information profile attributes impact the sharing of foreign information? As before, we focus on the effects of the providers and the acquisition place. For the sake of space and in order to focus on our main quantities of interest, we report here only the results provider and place-based effects on the likelihood of sharing information already chosen for use. Full model estimates are provided in Appendix B.

**Figure 6** reports the findings. Regarding providers, we find some evidence that the relationship between the information user and the provider has an impact on the decision to share the information. Relative to a stranger, information obtained from a neighbor, friend, or family member is less likely to be shared with another stranger. In other words, although strangers are the least favored recipients of foreign information, respondents are more likely to share information obtained from a stranger with a fellow stranger. We see similar effects for the attribute levels of neighbor, friend, and family, although the effects are modest. A neighbor providing the foreign information increases the probability that a respondent would share the information with another neighbor by 5% (0.05).

We find a few notable place-based effects as well. Relative to the reference category (one's own home), if the information was shared outside in a park or on the street, it increases the probability that the information will be passed along to a fellow stranger, perhaps indicating the effect of anonymity. We note that information acquired in another person's home also increases the chances that it will be shared with a friend, indicating that friends and other's homes are likely associated and trustworthy spaces. Lastly, we note that people are less likely to share information acquired at a market with family, relative to information acquired at one's own home. Again, these effects are not particularly strong, but they do indicate where trust resides and how that might influence one's decision to share information in North Korea.

**Figure 6.**

**Effects of Foreign Information Attributes on Probability of Sharing Media**  
By target recipient



Point estimates represent the effects of the randomly assigned information attribute values on the probability of the information profile selected being shared. The estimates are based on the benchmark logit models with clustered standard errors. The error bars show 95% confidence intervals.

## DISCUSSION & CONCLUSION

Overall, the findings presented in this report indicate that North Korea continues to control the spread of information in North Korean society through its domination and control of social institutions, especially those outside the home. Authoritarian strategies that seek to dominate bridges between citizens, like those employed in North Korea, are able to curtail access to (illicit) content and make the state more durable. But information spreads nevertheless and this report advances our knowledge of how and, to some extent, why this happens. In doing so, it underscores the locations of state-citizen contention in contemporary North Korea.

As findings from the choice-based conjoint show, North Koreans have relatively high levels of trust in their friends and family, two types of social ties that are not directly targeted by institutions of daily social surveillance in North Korea. It is from these ties that people will likely acquire and use foreign information. Most of civil society and the social capital that binds non-state relationships is co-opted by the North Korean state, but as our research findings show, there is evidence that less intimate but more common spaces and relationships – such as neighbors, neighborhoods, and markets – are areas of contention.

To be clear, the North Korea regime tries to co-opt social ties at the neighborhood level and in other community institutions. We observe this, for instance, with so-called ‘People’s Groups’ acting as a major tool of mass surveillance at the local level (Lankov et al., 2012). Our results indicate that although neighborhood-level organizations may effectively limit the level of potential information diffusion in a locality, there is potential room for growth. Neighborhood spaces are battlegrounds for social control between the state and would-be information consumers. Indeed, it appears that the state has been less successful in breaking down trust between neighbors than between strangers.

With respect to spaces, people clearly feel more secure in their own homes than anywhere else. As our findings show, one’s own home substantially motivates the decision to acquire and use foreign content. Despite expectations to the contrary, the same cannot be said for markets. At best, these are neutral spaces for content acquisition. Markets neither motivate nor discourage foreign information use.

However, other outdoor spaces are considerably less preferred, perhaps because trading or exchanging items outdoors is more visible and potentially socially abnormal looking than within the commercial setting of a market. What this means is that markets may not be bridges that forge non-state, civic ties for information sharing across groups in North Korean society yet, but commercial spaces apparently are less dangerous as sources for illicit content than other outdoor spaces.

General trust is understood to be low in North Korea (B.-Y. Kim, 2018). However, the effects of this lack of trust are not uniform but relation- and location-specific. Spaces that are reliant on general trust, such as markets, where traders and customers may not know one another well are not significantly less preferred than other spaces for content acquisition. But family and friends are preferred substantially over neighbors and particularly strangers.

Similarly, there are location and relation-specific effects regarding information dissemination, specifically whether information acquired and used is shared further and with whom. We find, first, people favor family and friends over neighbors and strangers when they disseminate content they acquire. This is an unremarkable but nonetheless noteworthy finding consistent with the preference we observed for content from family members and friends over that of neighbors and strangers. The fact that over 30% of respondents indicate they would share content with strangers, however, demonstrates that our current measures of social trust in North Korea do not fully capture the role that general social trust may play in even politically risky activities.

When the effects of profile attribute on the decision to disseminate are further unpacked, however, there are some important relation-specific effects. Contents acquired from strangers are far less likely to be shared with closer members of the respondent’s social network, and vice versa. While contents acquired from strangers are more likely to be shared in markets and other outside spaces. Such a result suggests that anonymous spot markets for foreign content are self-supporting with content acquired from strangers like traders being more likely traded with other strangers.

## *Action-oriented implications*

In addition to the broader findings of this research, there are practical implications for NGOs and other organizations who program information dissemination strategies and assemble information to be sent in and distributed within North Korea. What should such organizations takeaway from this research? Some findings are more actionable than others, while the practical implications of other findings may be less clear.

We start with the practical and actionable findings that organizations who are assembling information can control. We observe the following:

- USBs are most preferred as a type of distribution media and should be prioritized. Foreign devices, such as cell phones, are not preferred and should be avoided. CDs or DVDs are okay for use (only slightly less preferred than a USB) and North Korean phones are a wash (neither preferred nor undesirable).
- Content should be South Korean focused or international and non-fiction, such as news and related information, and come in video format. Information about life in South Korea is most desirable, it would seem. This is both practical and probably expected. But it is worth noting that North Korean content, even that which is informative, does not motivate information use.

Regarding equally important but less actionable findings, we note the following:

- Friends and family are, unsurprisingly the most trusted sources of information.
- Relatedly, information shared in the home is the most preferred. Content provided in outside spaces is not, but markets are a site of contention – they are neither preferred nor undesirable.

Given the important role that marketplaces and market actors are thought to play in information dissemination, it is worth elaborating on the market-related findings to conclude this section. First, our findings should not be read as saying that markets are not potentially useful conduits through which information and content can flow. However, we must think of

markets as spaces built on the trust created through friendship or family ties. This delimits the utility of markets as a source of potential illicit content, making relationships between traders, and between customers and traders, important potential mediating factors in the role of markets in dissemination. Foreign media consumption, trade and dissemination in North Korea is a criminal enterprise, and criminal markets generally require more trust and closer personal ties (e.g., Malm et al., 2010; May & Hough, 2004). Practically, then, we advise the following:

- Focus dissemination on between wholesale traders and disseminate content that will appeal to people with varied, diverse friendship networks.
- Accept the limitations that a criminal enterprise will face under such circumstances and be less ambitious in the political messages that content seeks to impart if the content is political at all.
- Subtler content that combines messages interesting to donors but that has mass appeal to North Korea's trader class will be easier to circulate beyond limited kinship networks.
- To increase probability of successfully disseminating information, workshop new content ideas and dissemination strategies with former North Korean wholesale traders before sending such content into the country.
- Work within existing commercial networks rather than trying to create a cadre of activists within the country.

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## APPENDIX A - ADDITIONAL SAMPLE INFORMATION

Survey participant recruitment and survey implementation was carried out by Woorion, a South Korea-based NGO specializing in defector-migrant resettlement and survey logistics. The survey design and content were extensively workshopped with NGOs who deal with the North Korean information environment, and with focus groups of North Korean defector-migrants residing in South Korea. To limit the effects of resettlement and exposure to new institutions, we sought to recruit respondents who left North Korea no later than 10 years before the survey was carried out. In total, 313 respondents were recruited.

In addition to administering the survey experiment, we collected background information on survey participants, including demographics and socioeconomic information. We also asked a battery of direct questions about information use in North Korea. Information about migration and resettlement, background in North Korea, and pre-migration socioeconomic class is provided in **Table A.1**. We see that 73% of the sample are women with an average age of approximately 35. The average year of defection from North Korea is 2015, the average time spent in China is less than two years, and the average number of years spent in South Korea is five. A small number of respondents defected from North Korea more than 10 years prior to the survey (the earliest in 2004), but we note here that 96% of those recruited left no later than 2010.

The sample attributes of this survey are consistent with other defector-migrant surveys, reflecting the background of the defector-migrant community. See Denney (2018), Kim (2017: 41-217), and Green & Denney (2021: 159-162) for a more thorough consideration of the implications of using defector-migrant samples to make inferences about life in North Korea.

Information about the reasons respondents defected from North Korea is provided in **Table A.2**, and responses to direct questions regarding foreign information use is provided in Appendix C. Given the quality controls applied to this project, there are no missing variables to report. All questionnaire material and answers are provided in English for this report, but they were originally administered in Korean and written specifically for North Koreans.



<b>Table A.1. Background on Defector-Migrant Sample</b>					
<i>Statistic</i>	<i>N</i>	<i>Mean</i>	<i>St. Dev.</i>	<i>Min</i>	<i>Max</i>
Women	313	0.73	0.45	0	1
Age	313	35.05	11.05	20	64
Origins: Borderlands <sup>+</sup>	313	0.85	0.36	0	1
<i>Migration and Resettlement<sup>++</sup></i>					
Year Defected from North Korea	313	2015	2.69	2004	2020
Years spent in China	313	1.70	1.90	1	19
Years spent in South Korea	313	5.00	2.38	0	17
<i>Background in North Korea</i>					
Market Experience	313	0.67	0.47	0	1
Party Background (self)	313	0.09	0.29	0	1
Party Background (family)	313	0.65	0.48	0	1
Army Service	313	0.15	0.36	0	1
<i>Socioeconomic Status in North Korea<sup>+++</sup></i>					
Upper Class	313	0.34	0.47	0	1
Middle Class	313	0.30	0.46	0	1
Lower Class	313	0.26	0.44	0	1

<sup>+</sup> Defined as the following jurisdictions: North Pyongan, Chagang, Ryanggang, North Hamgyong, and the special city of Rason.

<sup>++</sup> As noted, a limited number of participants (n=7) left North Korea prior to 2010.

<sup>+++</sup> Class is defined by a question about material well-being prior to defection. Those who were able to afford expensive items such as cars and apartments or could easily purchase higher end durable goods like refrigerators are counted as 'higher class.' Those who could purchase basic goods without struggling are classified as 'middle class.' Those who can afford mere necessities (e.g., food) or struggle to get by on a day-to-day basis are counted as 'lower class.'

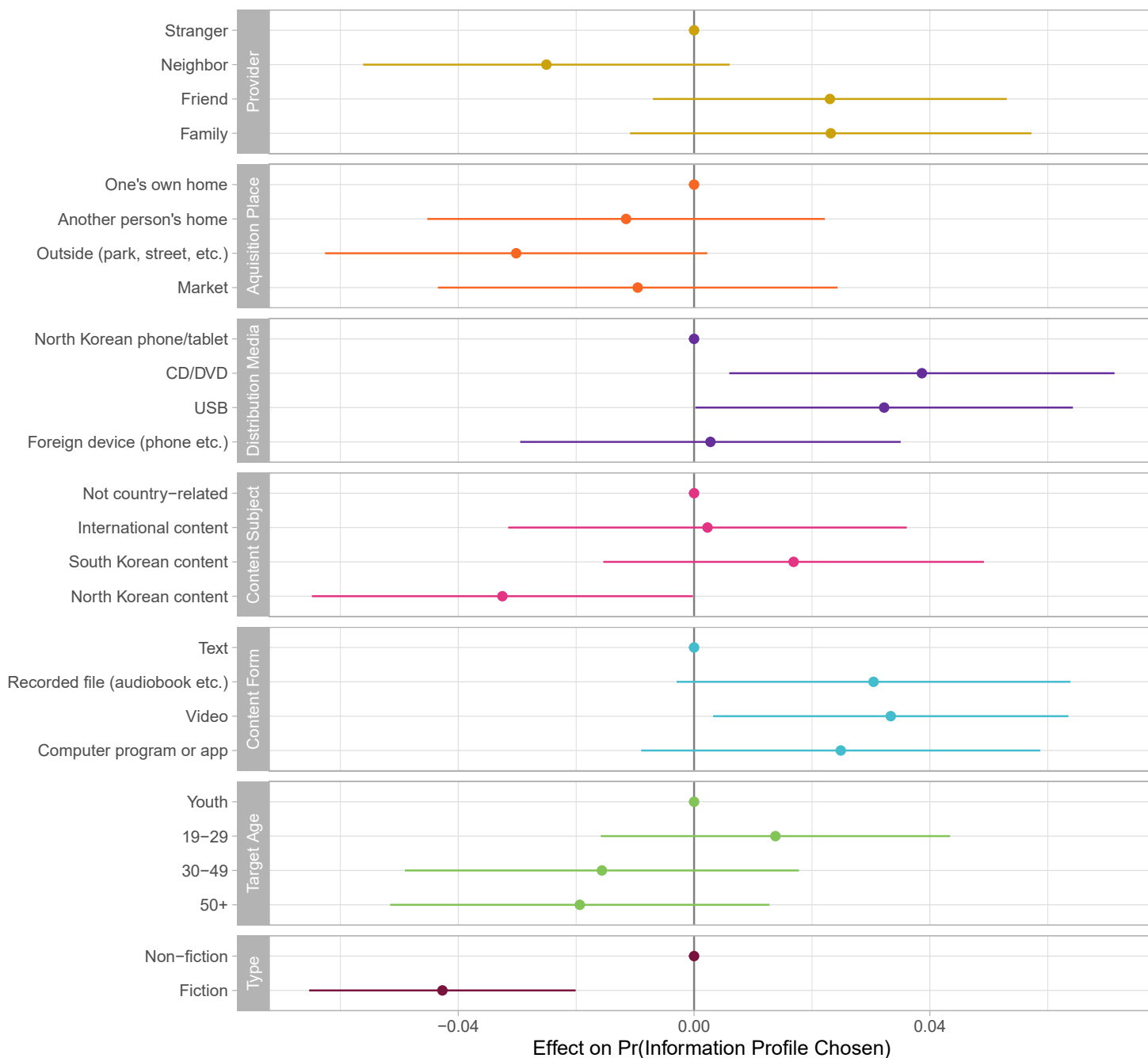
<b>Table A.2. Reason Respondent Defected from North Korea</b>		
<i>Value</i>	<i>N</i>	<i>Prop.</i>
Did not like North Korea's system of surveillance and control (in search of freedom)	72	0.23
Wanted to give a better life to family (children etc.)	52	0.17
In search of, or to live with family who had left the North first	49	0.16
Because I wanted to earn more money	44	0.14
My safety felt threatened	37	0.12
At the urging of someone who had already left (excluding family)	16	0.05
Because of a lack of food	15	0.05
Other	13	0.04
Along with family	10	0.03
At the urging of person(s) near me who weren't family	5	0.02

# APPENDIX B - SUPPLEMENTARY INSIGHTS

Material provided in Appendix B covers additional and supplementary information regarding the analysis. **Figure B.1** shows the AMCEs for foreign information attributes using the ratings-based measure instead of the forced-choice. **Figures B.2-B.6** show conditional marginal means based on select respondent characteristics. Lastly, **Table B.1** shows the full regression results for information sharing by target recipient.

**Figure B.1.**

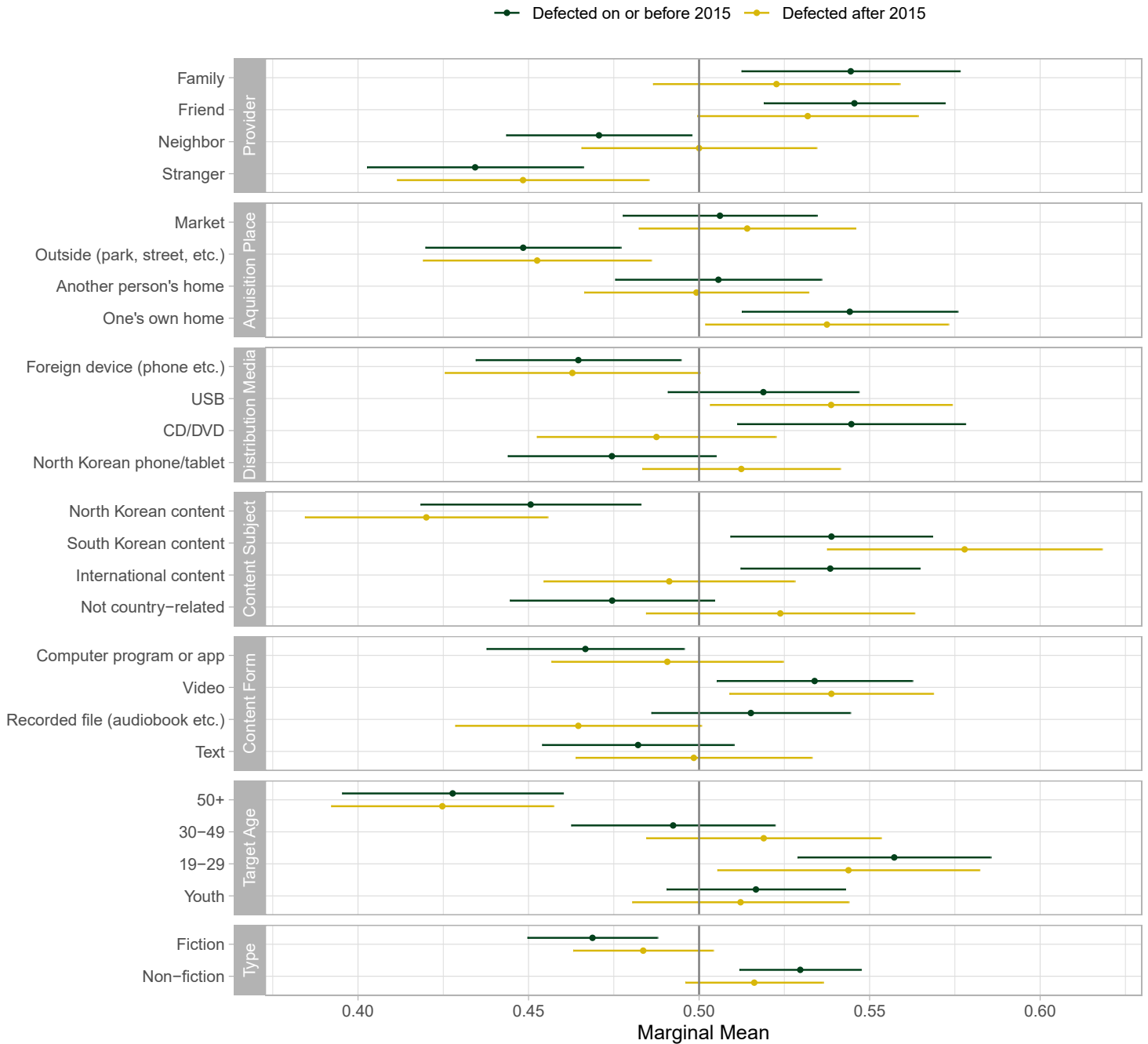
Effects of Foreign Information Attributes on Probability of Use  
Ratings-based estimates



Estimates represent the effects of the randomly assigned information attribute values on the probability of the information profile being preferred for use. Estimates are based on the benchmark logit model with clustered standard errors. The error bars show 95% confidence intervals.

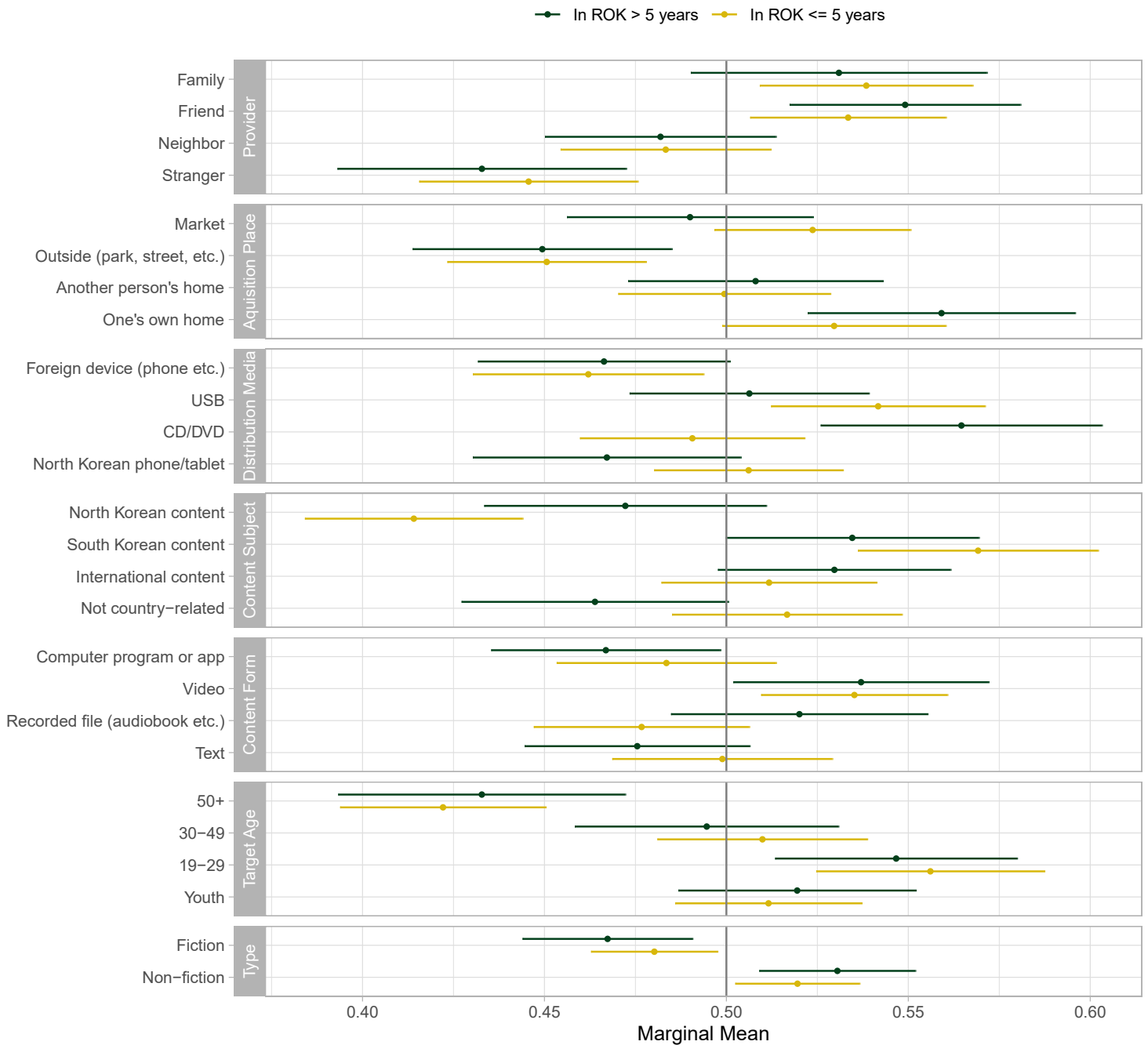
**Figure B.2.**

## Marginal Means of Foreign Information Attribute Levels By period of defection



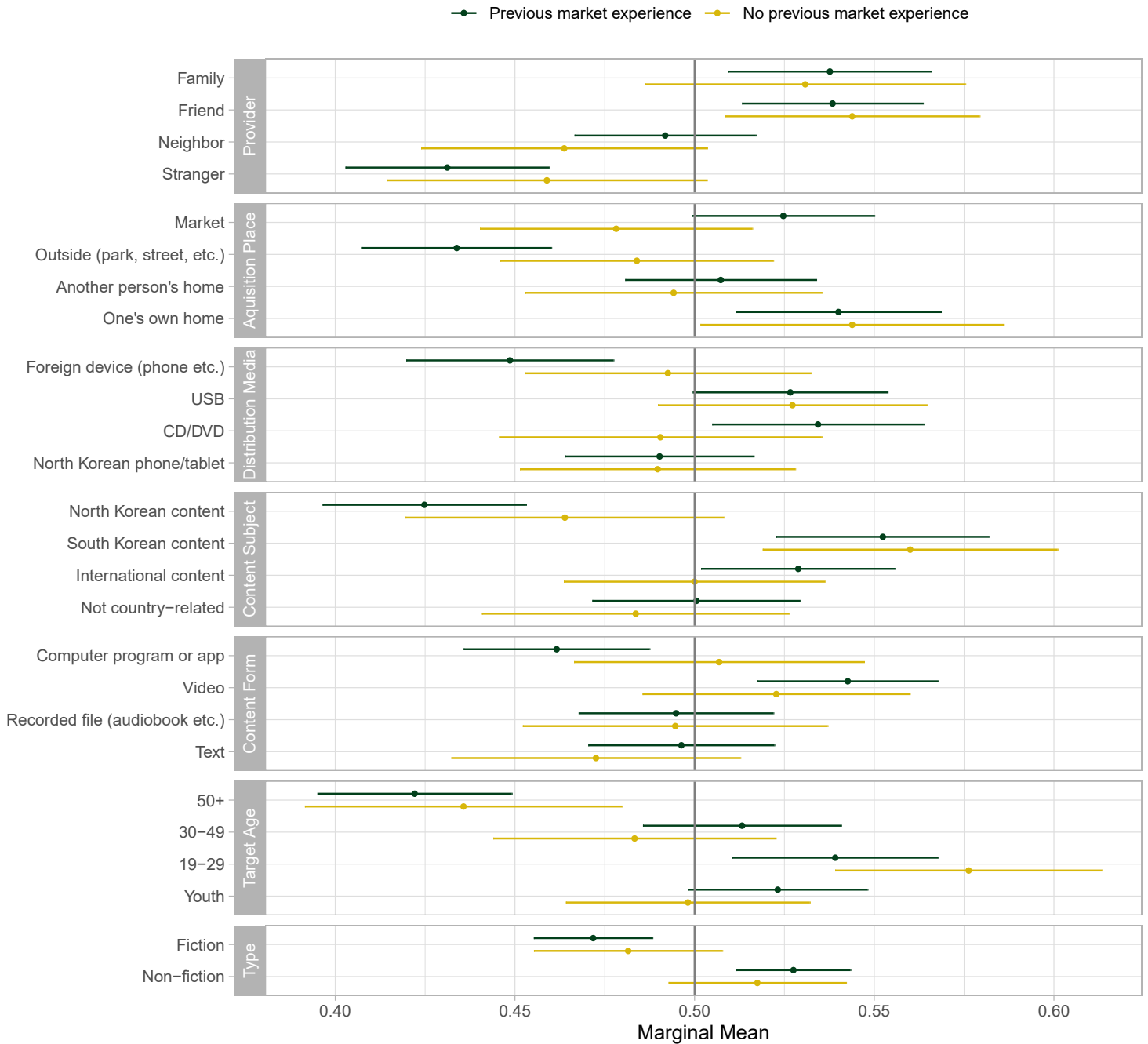
**Figure B.3.**

**Marginal Means of Foreign Information Attribute Levels**  
By time in South Korea ("ROK")



**Figure B.4.**

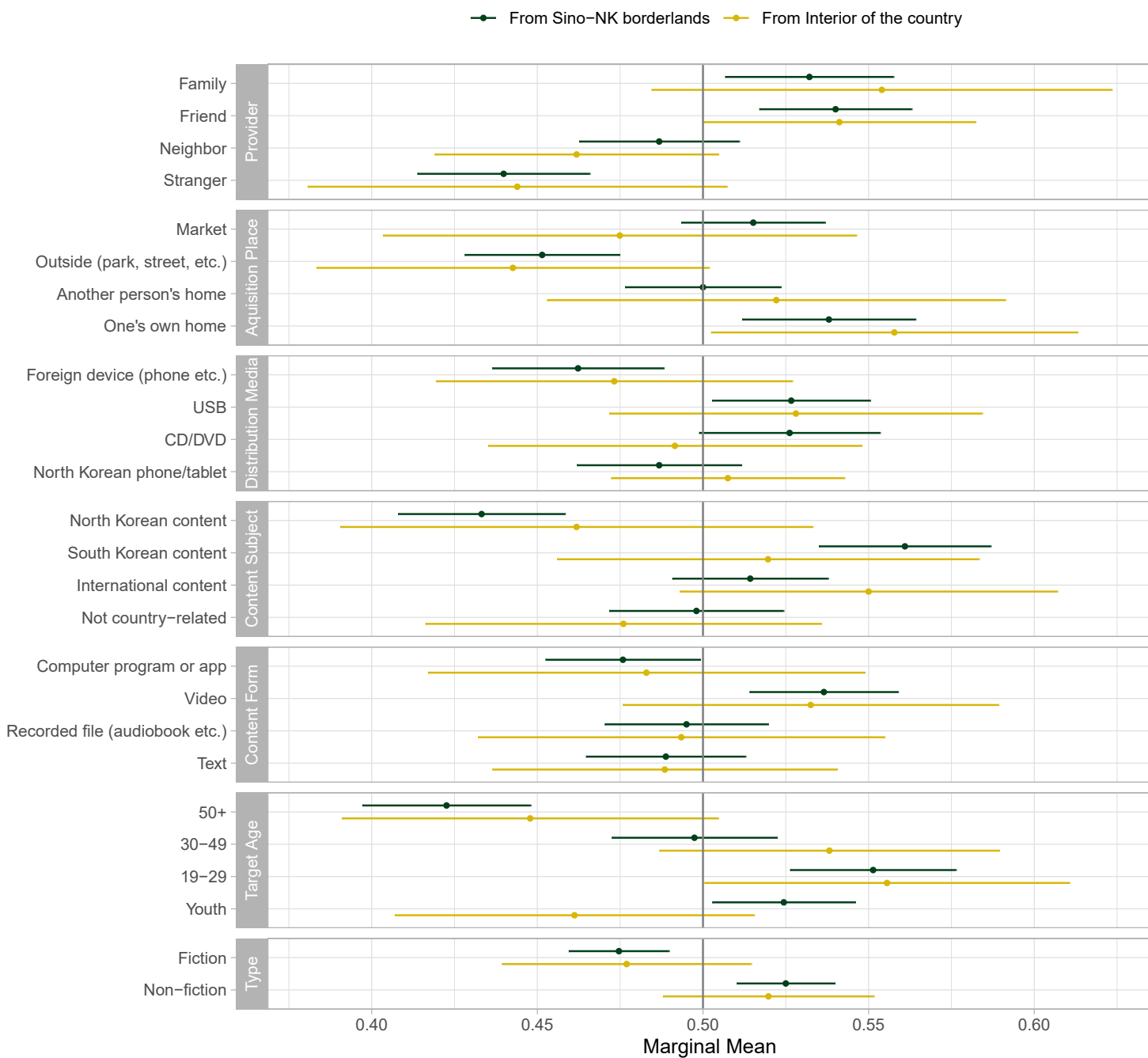
### Marginal Means of Foreign Information Attribute Levels By previous market experience in North Korea



**Figure B.5.**

## Marginal Means of Foreign Information Attribute Levels

By origins: borderlands vs. interior

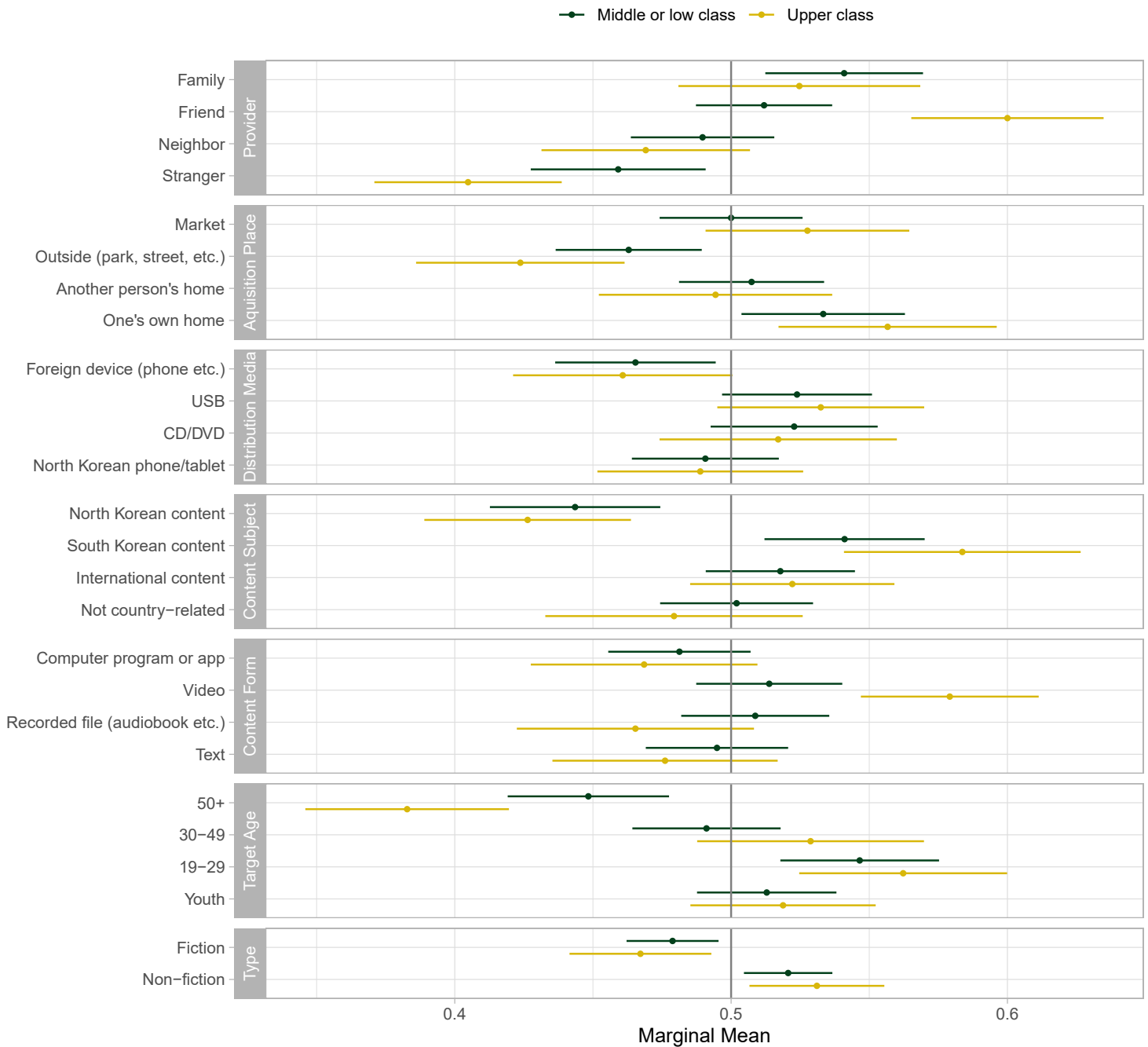


Values represent the mean outcomes of all attribute levels, averaged across all other features. Feature levels with Values greater than .5 increase profile favorability. The error bars show 95% confidence intervals.

**Figure B.6.**

## Marginal Means of Foreign Information Attribute Levels

By class: upper class vs. middle/low



**Table B.1.**

	Stranger	Neighbor	Friend	Family
(Intercept)	0.325*** (0.043)	0.561*** (0.046)	0.760*** (0.039)	0.821*** (0.036)
Neighbor	-0.059* (0.023)	0.049+ (0.027)	0.020 (0.023)	0.018 (0.021)
Friend	-0.085*** (0.025)	0.008 (0.027)	0.037+ (0.021)	0.027 (0.021)
Family	-0.074** (0.025)	-0.017 (0.028)	-0.020 (0.022)	0.043* (0.020)
Another person's home	-0.018 (0.019)	0.042 (0.026)	0.052** (0.019)	-0.019 (0.019)
Outside (park, street, etc.)	0.045* (0.019)	0.031 (0.024)	0.016 (0.021)	-0.027 (0.021)
Market	0.034+ (0.019)	-0.002 (0.026)	0.012 (0.020)	-0.043* (0.019)
CD/DVD	0.011 (0.020)	-0.013 (0.025)	-0.012 (0.022)	0.019 (0.019)
USB	-0.024 (0.021)	-0.033 (0.027)	0.004 (0.020)	0.018 (0.020)
Foreign device (phone etc.)	-0.010 (0.020)	-0.017 (0.025)	-0.024 (0.019)	0.010 (0.019)
International content	-0.017 (0.020)	0.005 (0.025)	0.043* (0.021)	0.006 (0.018)
South Korean content	-0.026 (0.021)	-0.013 (0.026)	0.039+ (0.021)	-0.024 (0.020)
North Korean content	-0.022 (0.024)	0.001 (0.028)	0.059** (0.020)	0.010 (0.018)
Recorded file (audiobook etc.)	-0.037 (0.023)	-0.007 (0.026)	0.010 (0.020)	-0.013 (0.022)
Video	-0.044* (0.021)	-0.022 (0.024)	0.026 (0.019)	0.005 (0.020)
Computer program or app	-0.069** (0.023)	-0.008 (0.026)	0.024 (0.020)	0.008 (0.019)
19-29	-0.047* (0.019)	-0.027 (0.023)	-0.005 (0.019)	-0.012 (0.018)
30-49	0.005 (0.020)	-0.021 (0.024)	-0.026 (0.021)	-0.025 (0.020)
50+	-0.011 (0.021)	-0.014 (0.025)	-0.032 (0.021)	0.009 (0.017)
Fiction	0.003 (0.014)	-0.001 (0.019)	-0.004 (0.014)	0.009 (0.014)
Num.Obs.	3130	3130	3130	3130

Each column represents the target recipient with whom respondents were asked whether they would share the information they had previously indicated they would use. Coefficients represent the average marginal effects of the attribute values on the probability of the chosen information profile being shared with the specified recipient. Estimates are based on logit models (clustered standard errors in parentheses). Reference categories are omitted. +p<.10, \*p<.05, \*\*p<.01, \*\*\*p<.001



## APPENDIX C - BACKGROUND ON INFORMATION USE

Appendix C shows the answers to additional background questions about information use in North Korea (Figures C1-C3). The data shown here is observational, not experimental.

**Figure C.1.**

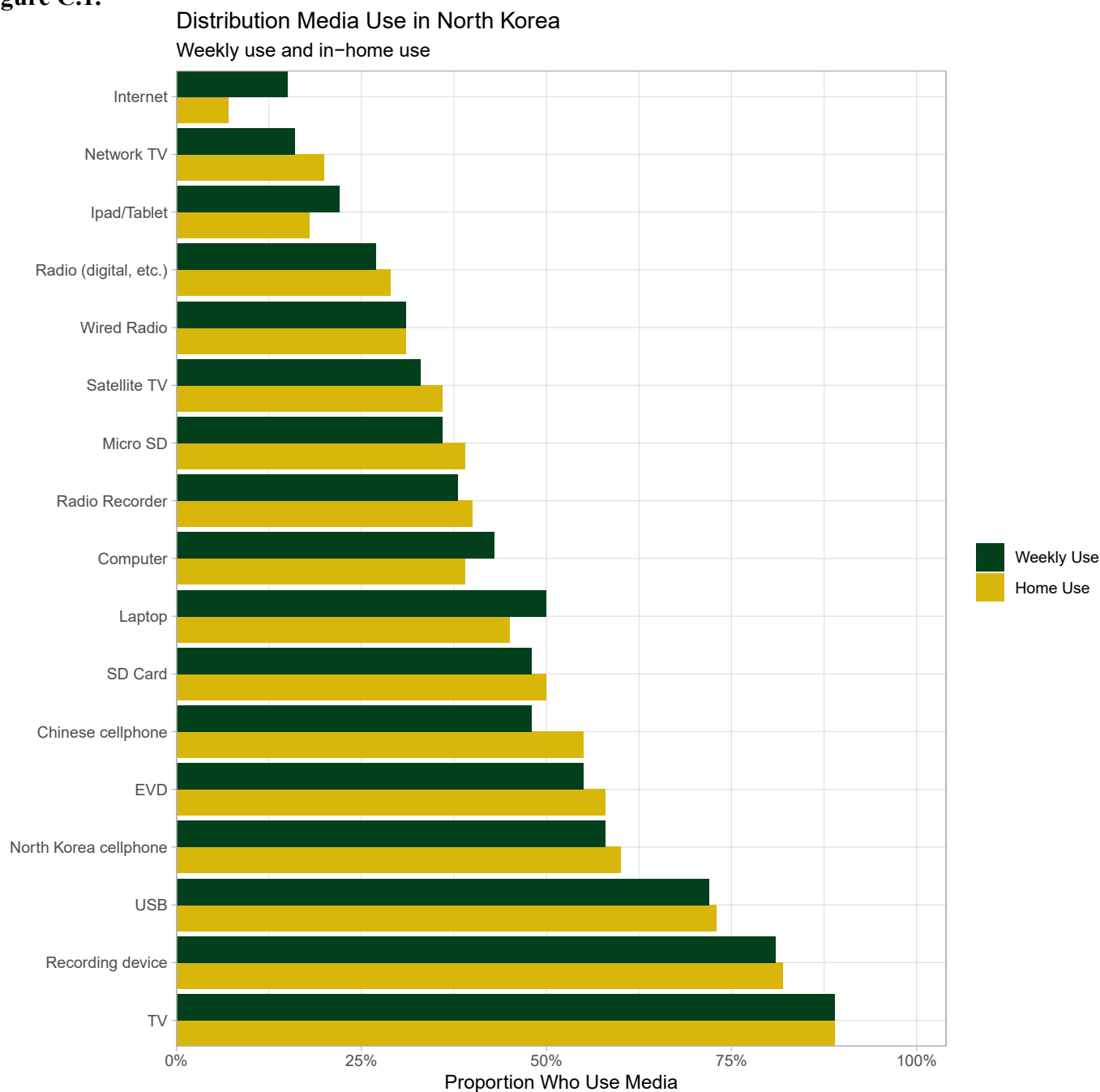
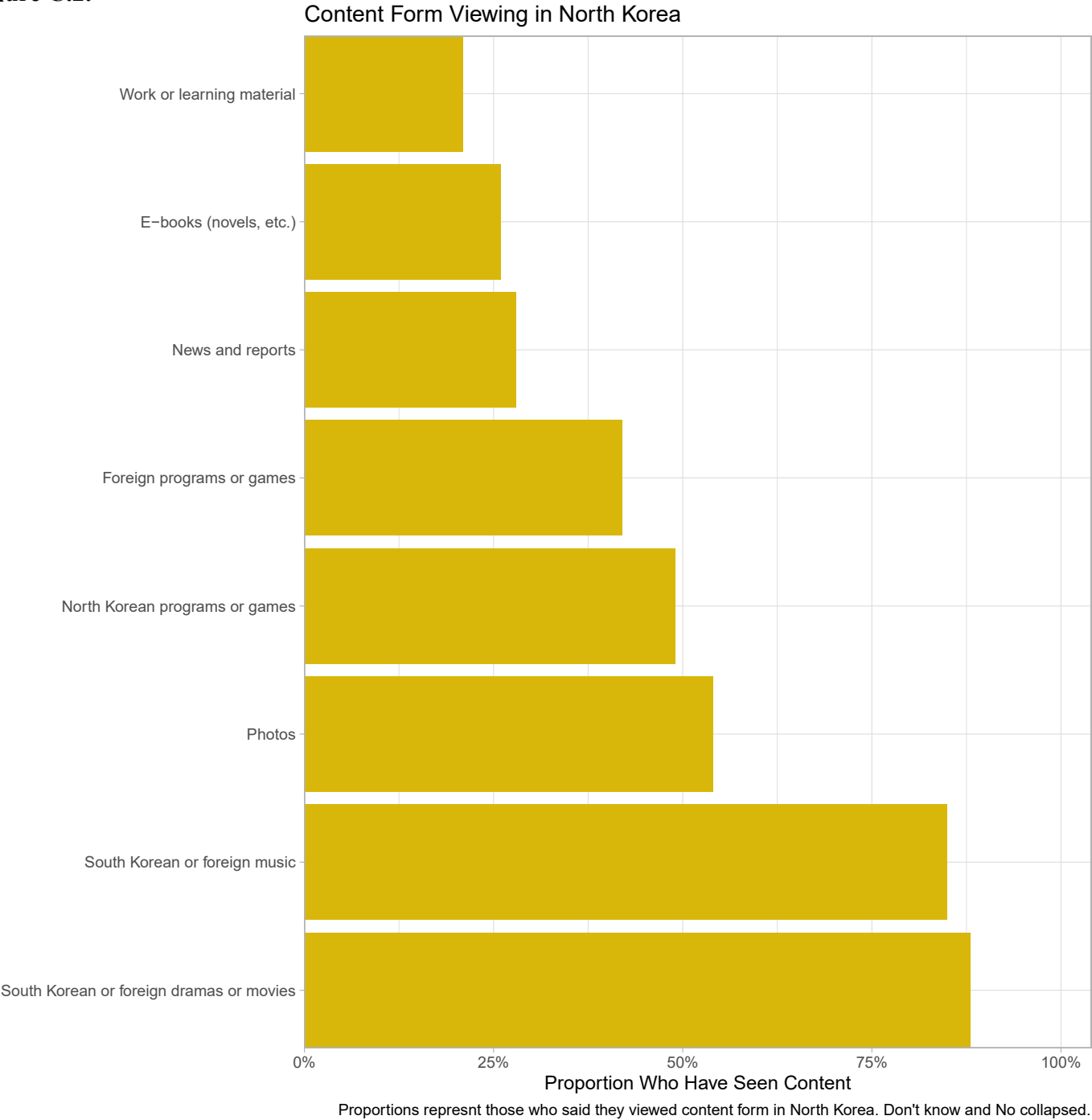


Figure C.2.



**Figure C.3.** Sources of Foreign Information in North Korea

