

Does Responsible Gold Certification Enhance Transparency?

The Knowledge and Communication of Jewellers

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Introduction

The fine jewellery industry has faced increased scrutiny since the ‘blood diamond’ scandal in the 1990s, which exposed severe human rights abuses and the funding of armed conflict through diamond sales. This revelation led to a broader review of mineral sourcing practices, particularly focusing on gold. There is a growing body of literature showing that gold mining is associated with environmental degradation, health hazards, precarious working conditions, child labour, and links to illegal armed groups (e.g., Ahlerup et al. 2020; Brugger et al. 2024; Bugmann et al. 2022; Knoblauch et al. 2020; Santos 2018; Van der Merwe 2022; Zabsonré et al. 2018).

As global awareness of the harmful impacts of mining practices grows, demand for responsibly sourced¹ fine jewellery is expected to increase (McKinsey & Company 2021). For consumers to know that the gold jewellery they buy meets basic ethical and environmental standards, greater transparency in the gold supply chain – including the traceability of gold to its source – is essential. Therefore, companies in the jewellery industry are increasingly turning to voluntary certification schemes to source responsibly mined gold. These voluntary certification schemes have been developed to ensure minimum social and environmental standards and to provide transparency on the conditions under which gold is mined. Currently, four predominant certification schemes uphold responsible sourcing practices in the gold jewellery supply chain: the *Responsible Jewellery Council (RJC) Code of Practices (CoP)*, the *Responsible Jewellery Council (RJC) Chain of Custody (CoC)*, *Fairtrade* and *Fairmined*.

1 Responsible sourcing refers to practices that ensure minerals are mined and processed in ways that are ethical and sustainable. Ethical sourcing emphasises adherence to social principles, such as respecting human rights and labour rights, while sustainable sourcing focuses on minimising adverse environmental impact. Hence, ‘responsible sourcing’ and ‘ethical and sustainable sourcing’ are used interchangeably in this chapter.

However, consumers face significant challenges in purchasing certified, responsibly sourced gold jewellery. First, the socially and environmentally responsible attributes of the products are credence attributes, i.e., they are not observable before purchase or experienced after purchase (Darby/Karni 1973). Second, gold jewellery is typically purchased only on rare occasions, leading to a lack of experience in buying (responsibly sourced) jewellery. In an online survey of 2,591 Swiss respondents on (responsibly sourced) gold purchases conducted in 2018, 94 per cent said they had not bought any gold jewellery in the past year (Van der Merwe 2021). Moreover, while 90 per cent of respondents said that they were familiar with the *Fairtrade* label, one of the most prominent ethical product certification schemes, only 17 per cent had heard of *Fairtrade* gold.

Hence, jewellers and jewellery sellers have an important role to play as mediators in effectively informing consumers about the certification and the social and environmental attributes of jewellery. Interestingly, retailers in general, and retailers in the gold sector in particular, have been somewhat ignored in the literature on ethical and sustainable consumption, even though they may help to explain the intention-action gap that has been shown for many responsibly sourced products, where consumers express a high demand for them but often do not follow through (see e.g., Andorfer/Liebe 2012; Hainmueller/Hiscox 2015; Hainmueller et al. 2015; Hiscox et al. 2011; Tully/Winer 2014).

This raises the important question of whether retailers selling gold are effectively and proactively communicating sourcing information to consumers and whether there are differences in knowledge and communication between jewellers focusing on different types of responsible sourcing certificates.

To address this research question, we conducted a study where mystery shoppers visited jewellery stores in some of the largest cities in Switzerland. Switzerland is a particularly relevant setting for this study as it is the world's gold hub and a leader in the jewellery and watch industries (Deloitte 2020). At the same time, the Swiss government has shed light on concerns about gold imports potentially linked to human rights abuses (Tratschin et al. 2017), and unlike other countries, there is high institutional support for responsibly mined gold (Oakley 2022). We find that while 79 per cent of visited jewellers say that their jewellery is ethical or sustainable, only 13 per cent could communicate the origin of the gold, and these were exclusively shops selling *Fairtrade* or *Fairmined* gold. *Fairtrade* or *Fairmined* shops also displayed a deeper understanding of certification, whereas *RJC*-affiliated shops showed significant knowledge gaps. About 90 per cent of *RJC*-affiliated shops could not convey their *RJC* certification status and their understanding of what responsible gold sourcing means was not better than that of conventional shops. Moreover, about 85 per cent of jewellers do not display sourcing information, and almost none would have initiated discussions about the source or conditions of extraction unless asked for by the consumer. *Fairtrade*/*Fairmined* shops were more likely to display informa-

tion and required somewhat less probing, but overall, consumers must actively seek details about ethical and sustainable sourcing practices. As a result, the voluntary, company-led, responsible sourcing initiatives that exist today do not (yet) improve transparency about gold sourcing practices for consumers.

This study makes three key contributions to the existing literature. So far, the literature on the consumption of responsibly sourced products has mainly focused on low-value, commoditised products such as food, cosmetics, and clothing rather than luxury goods (Athwal et al. 2019; Dhaliwal et al. 2020). Second, the literature has focused mainly on consumer-specific factors influencing decisions to buy ethical products, such as their knowledge, self-image, attention, etc. (e.g., Friedrichsen/Engelmann 2018; Lefoll et al. 2022; Teyssier et al. 2015). In contrast, this study specifically delves into the role of mediators, such as retailers, a dimension that has received less attention in existing research (Fuentes/Fredriksson 2016). In fact, despite rising consumers' concerns about the adverse effects of mining, studies focusing on luxury goods find that consumers are less likely to consider ethics in luxury purchases compared to commoditised purchases (Achabou/Dekhili 2013; Davies et al. 2012). Third, it adds to a recent literature that uses the mystery shopper method in various fields of economics to shed light on the disparity between an entity's stated agenda and the actual communication of such agenda during physical interactions with customers (Anagol et al. 2017; Atuhumuza et al. 2020; Bennett/Yin 2019; Fitzpatrick 2017, 2023; Michelson et al. 2021; Mullainathan et al. 2012; Oehler/Kohlert 2009; Staudacher et al. 2021).

The remainder of the chapter is structured as follows. Section 2 explains the research design and the data. Section 3 presents the results. Section 4 concludes, discusses limitations and provides an outlook for future research.

Method and Data

The mystery shopper approach involves direct observational research in which an 'enumerator' assumes the role of a customer to assess the processes and procedures of service delivery (Wilson 1998). This method allows us to evaluate the effectiveness and quality of specific services, avoiding the social desirability bias or Hawthorne effects of classical survey research, where participants may change their behaviour if they are aware that they are being observed. Mystery shopping has been used extensively in various research fields, particularly in public health (Madden et al. 1997; Staudacher et al. 2021). It has also gained prominence in various subfields of economics, such as the financial sector (Atuhumuza et al. 2020; Mullainathan et al. 2012; Oehler/Kohlert 2009), insurance markets (Anagol et al. 2017), development economics (Fitzpatrick 2017, 2023; Michelson et al. 2021) and pricing economics (Bennett/Yin 2019; Fitzpatrick 2023).

For our research, the mystery shopper method allows us to capture an accurate representation of how jewellery retailers communicate the source and mining conditions of the gold they sell to consumers during everyday shopping interactions. As the enumerators pretended to be actual customers, both the jewellery shops and the shop assistants were unaware of the research, as no prior information was disclosed. Ethical approval for the study was obtained from the Ethics Commission of the Swiss Federal Institute of Technology (ETH Zurich).² The study adhered to strict ethical guidelines to protect the interests and identities of the participating stores and shop assistants, thereby ensuring the confidentiality and privacy of all parties involved.

We recruited four mystery shoppers. This small number of enumerators was deliberately chosen to reduce noise in the data. To ensure the authenticity of the shopping scenarios, we strategically selected shoppers who had at least an undergraduate degree, were in their mid-twenties to early thirties, and were native speakers of the local languages. The mystery shoppers were placed in pairs. This pairing of enumerators allowed them to blend in with regular customers to interact with shop assistants. The pairing approach facilitated in-depth discussions after each shopping experience, increasing the accuracy of recall of shopping interactions and thus mitigating potential personal bias.

Mystery shoppers completed a structured questionnaire on their mobile devices immediately after each store visit. Figure 1 illustrates the evaluation process. First, the shoppers collected observational data about the outside and inside of the store (Phases 1 and 2 in Figure 1). This involved gathering general store details and preliminary observations before interacting with sales staff, such as the number of staff present, the presence of non-jewellery items for sale, etc. This phase also included an assessment of the visibility of any certification schemes or ethical/sustainable initiatives, both outside and inside the store.

The core of our study's data collection focused on the interaction with the shop assistant (Phases 3 and 4 in Figure 1). The shoppers, portraying laypersons interested in ethical and sustainable jewellery, followed a standardised script to ensure consistency across the interactions. Each pair was first asked to select a gold ring. The chosen ring could be made entirely of solid gold or include other minerals such as gemstones. Shoppers expressed an interest in a gold ring in shops that only offered bespoke pieces rather than ready-made jewellery (e.g., workshops).

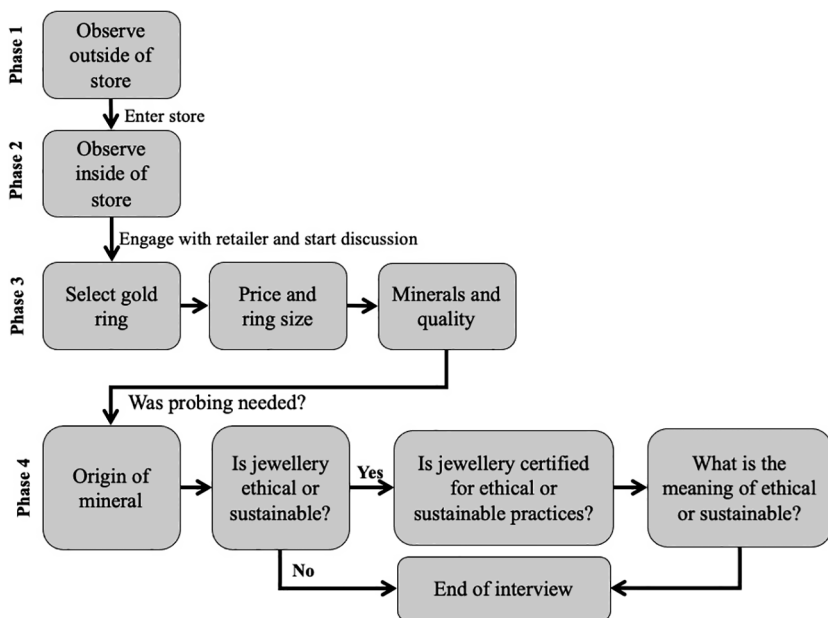
After selecting a ring, the shoppers initiated a discussion about the price and size of the ring, as well as the type and quality of minerals in the jewellery, to start a conversation about the minerals (Phase 3 in Figure 1). The mystery shoppers then

2 IRB approval number: EK 2023-N-100. The views and opinions expressed in this chapter are solely those of the authors and do not necessarily reflect the views or opinions of ETH Zurich.

proceeded to discuss the points listed below and carefully evaluated whether probing was required to gather information on four key elements of responsibly sourced gold in the following order (Phase 4 of Figure 1):

1. **Origin of the minerals:** *Do you know the origin of the minerals, especially gold, in the jewellery?*
2. **Responsible sourcing of minerals:** *Is the jewellery made in an 'ethical' or 'sustainable' way?* IF THE ANSWER WAS YES:
3. **Responsible sourcing certification:** *Is the jewellery certified for 'ethical' or 'sustainable' practices?*
4. **Meaning of responsible sourcing:** *Can you please explain what it means that the jewellery is considered 'ethical' or 'sustainable'? How does it impact the miners and the environment?*

Figure 1: Layout of mystery shopper evaluation



After interacting with a sales assistant or, in smaller shops, the owner and leaving the store, mystery shoppers were asked to recall which certification schemes or ethical/sustainability initiatives had been mentioned during the conversation. They were also asked to recall the specific points made by the owner or the sales assistant about the ethical and sustainable features of the jewellery. The average shopping in-

teraction lasted around 25 minutes, and the gold rings selected were typically priced at around CHF 2000.

Mystery shoppers visited shops that were certified by the *Responsible Jewellery Council* or *Fairtrade/Fairmined*. The *Responsible Jewellery Council* is the leading association in the jewellery industry, representing companies throughout the supply chain (RJC 2023b), with two types of company-level certification: the *Code of Practices (CoP)* and the *Chain of Custody (CoC)*. *CoP* certification is mandatory for all *RJC* members and requires companies to adhere to standards of social and environmental practices within their operations and with their business partners. However, the *CoP* does not require full traceability of minerals. The *CoC* certification focuses specifically on the traceability of gold and other precious metals within the supply chain. It ensures that these metals can be traced from mine to retailer (RJC 2023a).

Fairtrade and *Fairmined* are mine-level certifications specifically addressing the sourcing of gold from artisanal and small-scale gold mines (ASGM) in low- and middle-income countries. These certifications focus on improving social and environmental conditions in mining communities. Both certifications (similar to *RJC CoC* for industrial mining) ensure full traceability of gold from small mines to retail. Most buyers of *Fairtrade* or *Fairmined* gold are small jewellers, while larger companies report that the quantities available through *Fairtrade* and *Fairmined* do not meet their needs, leading them to opt for the *RJC* standard.

Recycled gold is also sometimes inaccurately seen as a responsible sourcing initiative. Unlike newly mined gold, recycled gold is sourced from previously used products such as jewellery, electronics, and various other items. Therefore, it does not take into account the original mining conditions or the origin of the gold. This distinction is crucial, as the use of recycled gold is intended to reduce the demand for new gold mining rather than to ensure ethical or sustainable sourcing from the outset.

The last column of Table 1 illustrates the sampling approach used. First, we divided jewellery shops into three distinct groups. The first group includes retailers selling responsibly sourced jewellery with fully traceable gold. These include officially licensed *Fairtrade*, *Fairmined* and *RJC CoC* shops. The second group follows responsible sourcing practices but does not guarantee full gold traceability. This group includes officially licensed *RJC CoP* shops. It also includes retailers that self-identify or market their products as ethical or sustainable without a specific responsible sourcing certification, often relying on supplier claims of responsible sourcing standards (but are not officially licensed). The third group consists of retailers that do not have an *ex-ante* explicit commitment to responsible sourcing practices or gold traceability, representing the traditional market segment.

Table 1: Comparison of gold sourcing standards

Name	Certified for responsible mining practices by external entity	Certification Level	Traceability of gold to source	Responsible mining practices	Main source of gold	Sample
Fairtrade/ Fairmined	✓	Mine level	✓	Focuses on improving social and environmental conditions in mining communities	ASM	Group 1 N=14
RJC Chain of Custody (CoC)	✓	Company level	✓	Focuses on how minerals were sourced and processed, upholding responsible sourcing	Industrial mining	Group 1 N=10
RJC Code of Practices (CoP)	✓	Company level	✗	Provides a common standard for ethical, social, human rights and environmental practices throughout the jewellery supply chain	Industrial mining	Group 2 N=19
Other responsible shops (self-marketed)	✗	✗	✗ (some-times)	Focuses on improving social and environmental conditions in mining communities	ASM and industrial mining	Group 2 N=8
Conventional shops	✗	✗	✗	✗	ASM and industrial mining	Group 3 N=31
Recycled Gold	✗	✗	✗	Focuses on reducing demand for newly mined gold	ASM and industrial mining	N/A

Notes: ASM = Artisanal Small-Scale Mining.

Given the relative niche status of stores selling *Fairtrade*, *Fairmined* or *RJC CoC* gold jewellery, we first sampled all of these stores in our selected cities (Group 1). To achieve an equal number of stores in the three groups, we conducted a random selection of stores for Groups 2 and 3. This random selection process aimed to mirror the number of stores in Group 1. To do this, we compiled a list of all jewellery stores in our selected cities using the websites *local.ch* and *search.ch*, which are the largest business directories in Switzerland. *RJC CoP* shops were cross-checked and added from the *RJC* website (*responsiblejewellery.com*). Retailers that self-identify or market their products as ethical or sustainable without a specific responsible sourcing certification were identified through online searches on Google, explicitly seeking shops marketing themselves as ethical or sustainable (using relevant keywords such as ‘ethical jewellery’ and ‘sustainable jewellery’ in the local language). From this comprehensive list, we randomly selected Group 2 and 3 stores. To ensure diversity, in cases where a jewellery company had multiple stores, we limited our selection to a maximum of two stores from the same company in each city.

Shoppers visited each store in the sample only once to avoid any learning or spillover effects from previous visits and to avoid raising audit suspicions among shops. This approach ensured the integrity of the mystery shopper methodology and maintained the authenticity of each interaction.

In total, mystery shoppers visited 82 jewellery stores in major Swiss cities between May and October 2023, with each mystery shopping pair sharing approximately an equal number of shops and with shops roughly evenly split between the three groups (25–30 shops per group). For the analysis, we analysed each certification scheme separately, with one exception: due to the limited presence of *Fairtrade* or *Fairmined* shops, we combined these two categories for our analysis to reflect their closely aligned ethical and sustainability standards: *Fairtrade* and *Fairmined* began as a unified initiative, but eventually diverged while retaining similar core principles (Oakley 2022). Although it is possible for a shop to sell different types of certifications, this scenario only occurred in one shop, which we classified as *Fairtrade/Fairmined*. To estimate the effect of different types of jewellers on their sourcing knowledge and their propensity to proactively discuss responsible sourcing, we estimate the following regression model:

$$Y_i = \alpha_0 + \alpha_1 \text{FTFM}_i + \alpha_2 \text{CoC}_i + \alpha_3 \text{CoP}_i + \alpha_4 \text{OtherResponsible}_i + \epsilon_i$$

where the outcome variable is denoted as Y_i and represents a shopping experience at shop i . FTFM_i represents *Fairtrade* and *Fairmined* shops, which are shops selling either *Fairtrade* or *Fairmined* gold. CoC_i represents *RJC CoC* shops, CoP_i denotes *RJC CoP* shops, and $\text{OtherResponsible}_i$ corresponds to other responsible shops that generally self-proclaim or market their products as ethical or sustainable jewellery without any official standard. Conventional shops remain the base category for compar-

ison. Given the limited sample size of 82 observations, we run simple OLS regressions and do not estimate nonlinear regression models (e.g., Probit or Logit), even if the outcome variable was binary because of problems with non-convergence and overfitting in small datasets.

Results

Table 2: Summary statistics

Variable	Mean (percent)
Shop somewhat crowded	24.4
Did not need to wait	64.6
Needed to make an appointment	13.4
Number of employees: 1	35.4
Number of employees: 2–4	40.2
Number of employees: 5+	24.4
Shop selling other goods than jewellery/watches	25.6
Shop selling jewellery from multiple brands	22
Pre-made jewellery only (no custom orders)	58.5
Jewellery contains gold only	25.6
Time of day: before 12	19.5
Time of day: 12–17	72
Time of day: past 17	8.5

Notes: N=82. The table presents summary statistics of the control variables used in the analysis. All variables are binary.

Table 2 shows the descriptive statistics of the 82 jewellery shops visited. Since mystery shoppers usually visited shops before 17:00, when shops are less frequented by other customers, they did not need to wait to be served (65 per cent). Among the jewellers, 35 per cent were very small, employing only one person, while 24 per cent were large, with more than five employees. Of all shops, 26 per cent also sold goods other than jewellery and watches (such as clothes, handbags, etc.) and 22 per cent offered jewellery from multiple brands. In such cases, shoppers were instructed to select the home brand jewellery. Most shops (59 per cent) sold only ready-made jewellery, not custom pieces. Regarding the jewellery discussed, 26 per cent featured

solely solid gold without additional visible minerals. We intentionally refrain from showing city or shop assistant characteristics to uphold a robust policy of preserving the privacy and confidentiality of the participants involved in the mystery shopper.

Table 3, columns 1 and 2 show the correlation between shops adhering to the different responsible sourcing initiatives and the visibility of these initiatives inside or outside of the store (Phases 1 and 2 of Figure 1). Table 3, columns 3–7 display differences in the knowledge of shop assistants about the origin and sourcing conditions of gold across different certification schemes (Phase 4 of Figure 1).

About 40 per cent of shops selling *Fairtrade*/*Fairmined* display a certification scheme outside their store (e.g., in window displays or on signage), and 50 per cent show such information inside the store. Jewellers who self-market their shops as ethical or sustainable also tend to display information outside but not necessarily inside the store. *RJC* stores (both *CoP* and *CoC*) never displayed any sourcing initiative, while three conventional stores displayed information inside the store related to recycled gold.

Table 3: Visibility of sourcing initiatives and knowledge of shop assistants

	(1) See any certification scheme or ethical/sustainable initiative Outside the store (0,1)	(2) Inside the store (0,1)	(3) Says the jewellery is ethical or sustainable (0,1)	(4) Knows the origin of the gold (0,1)	(5) Discussed Fairtrade or Fairmined (0,1)	(6) Discussed RJC (0,1)	(7) Knowledge score (0–10)
Reference category: Conventional shops							
Fairtrade/ Fairmined	0.396*** (0.140)	0.475*** (0.147)	0.387*** (0.090)	0.714*** (0.125)	0.876*** (0.089)	-0.120 (0.143)	3.477*** (0.666)
RJC CoC	-0.032 (0.033)	-0.097* (0.055)	0.287** (0.133)	0.000 (0.000)	-0.053 (0.053)	-0.152 (0.151)	-0.737 (0.487)
RJC CoP	-0.032 (0.033)	-0.097* (0.055)	0.177 (0.132)	0.053 (0.053)	0.014 (0.086)	-0.196 (0.125)	0.330 (0.465)
Other responsible shops	0.593***	0.278	0.387***	0.000	0.197	-0.013	0.888

	(0.180)	(0.185)	(0.090)	(0.000)	(0.168)	(0.191)	(0.785)
Constant (mean of conven- tional)	0.032	0.097*	0.613***	0.000	0.053	0.263**	1.737***
	(0.033)	(0.055)	(0.090)	(0.000)	(0.053)	(0.105)	(0.278)
Observa- tions	82	82	82	82	65	65	65
R^2	0.388	0.310	0.153	0.601	0.657	0.046	0.454
Mean	0.146	0.171	0.793	0.134	0.262	0.169	2.569

Notes: This table presents Ordinary Least Squares (OLS) regression results. Conventional shops are the comparison group. The dependent variables are as follows. Columns 1 and 2: Responsible sourcing initiatives are visible outside and inside the shop, respectively (1=yes, 0=no). Column 3: The shop assistant says the jewellery is ethical or sustainable (1=yes, 0=no). Column 4: The shop assistant knows the origin of the gold (1=yes, 0=no). Column 5: The shop assistant discussed the Fairtrade or Fairmined certification (1=yes, 0=no). Column 6: The shop assistant discussed the RJC certification (1=yes, 0=no). Column 7: Knowledge score (0–10). The score is constructed using the sum of ten binary variables, representing whether the shop assistant mentioned a specific topic related to ethical or sustainable sourcing. The sample in columns 5–7 is restricted to shops that said the jewellery is ethical or sustainable. Robust standard errors are in parentheses. Significance levels: *p<0.1, **p<0.05, ***p<0.01. p<0.01.

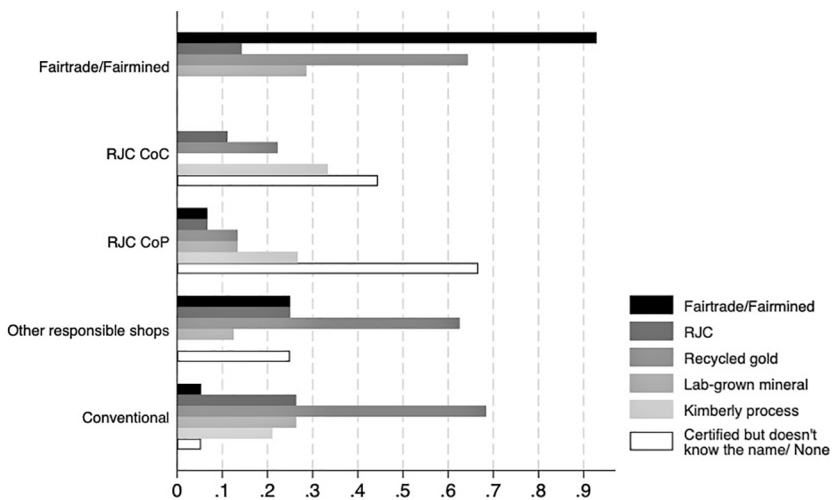
Around 80 per cent of shop assistants claimed that their jewellery was ethically or sustainably sourced (column 3), with shops involved in responsible sourcing certification or initiatives significantly more likely to make such claims than shop assistants in conventional shops. Only RJC CoP-certified shops were not more likely than conventional shops to make this claim, as various RJC CoP shop assistants could not definitively assert that their jewellery was responsibly sourced despite their responsible sourcing affiliation. Interestingly, 61 per cent of conventional shops still asserted that their jewellery was ethical or sustainable (with 100 per cent of shop assistants in Fairtrade/Fairmined and other responsible shops making this claim).

However, the results shown in column 4 of Table 3 suggest that, apart from Fairtrade/Fairmined shops, no shop knew the geographical origin of the gold in the jewellery. Furthermore, when discussing responsible sourcing certification, Fairtrade or Fairmined shops were able to name their certification to consumers (column 5), whereas RJC-affiliated shops were unable to inform consumers that they were certified by RJC (column 6).

Figure 2 provides further insights. Less than 10 per cent of RJC shops conveyed their RJC certification status. Even some conventional and other responsible shops

referred more frequently to *RJC* certification, noting that some of their suppliers had this certification (25 per cent). Instead, shop assistants in *RJC CoP* or *RJC CoC* stores were often unable to provide the name of the certification or were unsure if the jewellery was certified for ethical or sustainable practices (67 and 44 per cent, respectively). Moreover, even when they could provide a name of a specific responsible sourcing certification, they tended to refer to the Kimberly process, an international initiative to prevent ‘conflict diamonds’ from entering the mainstream rough diamond market, which is unrelated to gold. When conventional shops claimed their jewellery was ethical or sustainable, they frequently discussed recycled gold (68 per cent), although recycled gold is not necessarily responsibly sourced, as explained in Section 2.

Figure 2: Certification schemes or ethical/sustainable initiatives discussed by the shop assistants



Notes: Sample restricted to jewellers who said the jewellery is ethical or sustainable.

Table 3, column 7 displays differences in the shop assistants' knowledge of the meaning of ethical or sustainable. We created a score ranging from zero to ten to quantify this knowledge. This score represents the sum of ten binary variables, each indicating whether the shop assistant mentioned a specific topic related to ethical or sustainable sourcing. The ten topics are as follows: 1. Traceability of minerals; 2. Safe, healthy or better working conditions; 3. Environmental protection; 4. Transparency; 5. Artisanal and small -scale mining (ASM); 6. Better paid, fair price, minimum price;

7. Methods used to extract the gold (e.g., no mercury); 8. Child labour; 9. Conflict free; 10. Social projects in mining communities.

Fairtrade/Fairmined shops show a significantly higher understanding of the concepts of ethical and sustainable sourcing practices and their implications for miners and the environment. On the other hand, *RJC CoC* and *CoP*, as well as self-declared responsible jewellers, show similar levels of knowledge about ethical and sustainable gold sourcing to shop assistants of conventional shops. In particular, while *Fairtrade/Fairmined* shops discuss slightly more than five topics (out of ten) related to ethical and sustainable practices, other types of shops were only able to discuss about two topics on average.

Figure 3 provides further insights. A common thread across *RJC* and conventional shops is an emphasis on conflict-free minerals, with diamonds often at the forefront of discussions. In fact, in 55 per cent of all *RJC* visits, mystery shoppers anecdotally noted that they had to constantly redirect the conversation from discussing diamonds to gold when discussing the ethical/sustainable aspects of the jewellery. Strikingly, one-third of *RJC CoC* shops could not say anything about what responsible sourcing means for the miners and the environment. Another common theme among all shop assistants was the reference to local designers of jewellery, although this topic is not directly related to responsible sourcing and not part of any certification scheme. Finally, traceability was also a recurring theme, although retailers were unable to identify the exact origin of gold, except for *Fairtrade/Fairmined* shops (Table 3, column 4).

Figure 3.1: Topics mentioned by the shop assistants on the meaning of ethical or sustainable gold sourcing

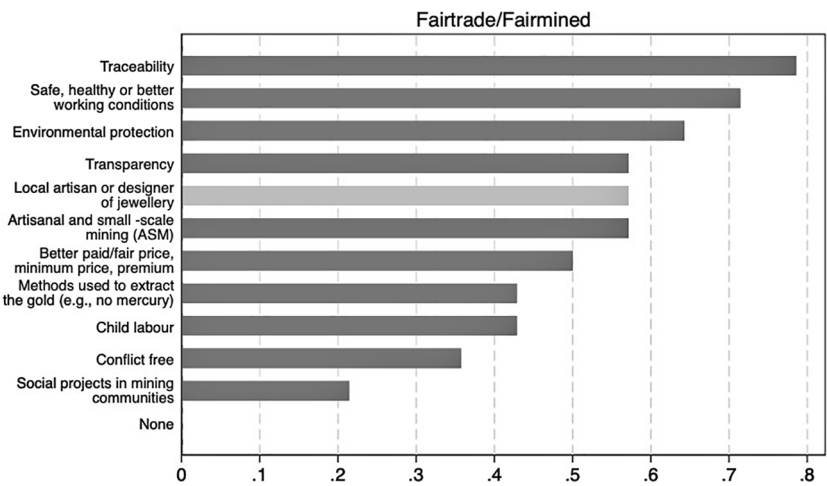


Figure 3.2

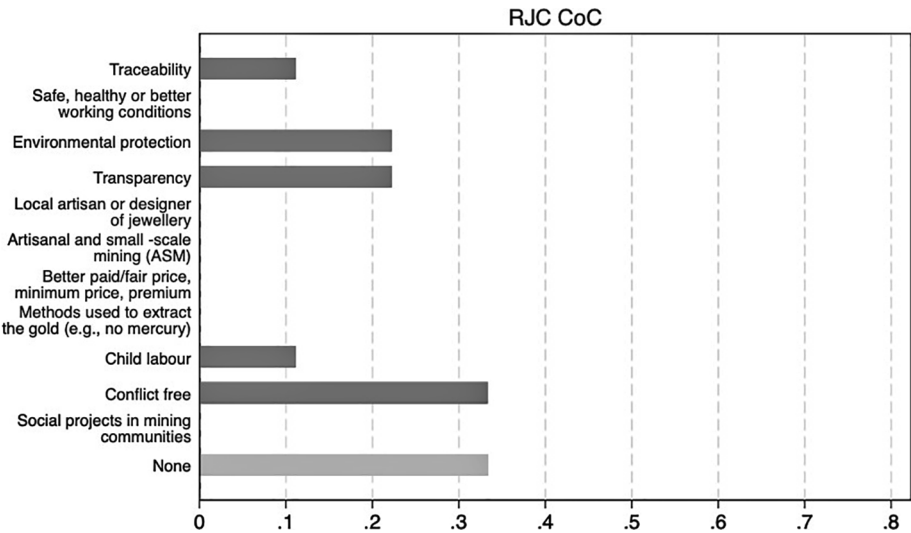


Figure 3.3

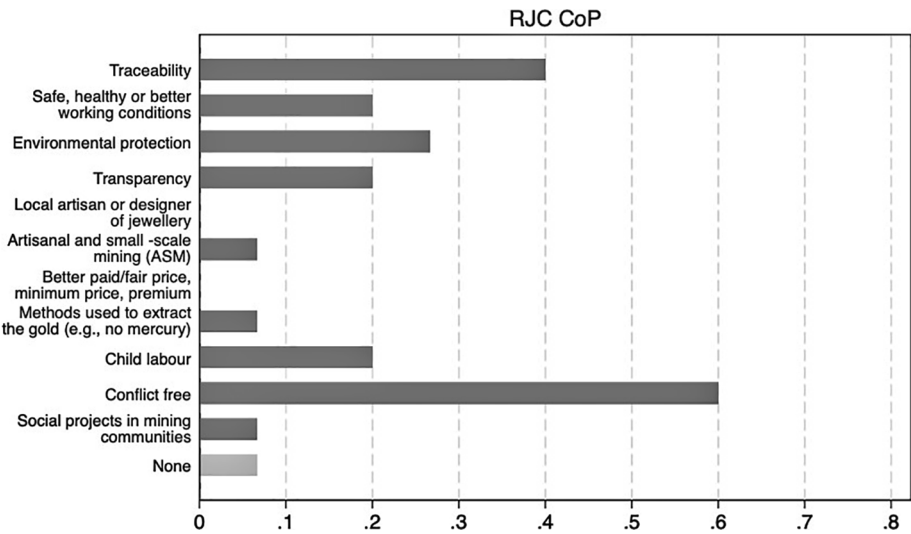


Figure 3.4

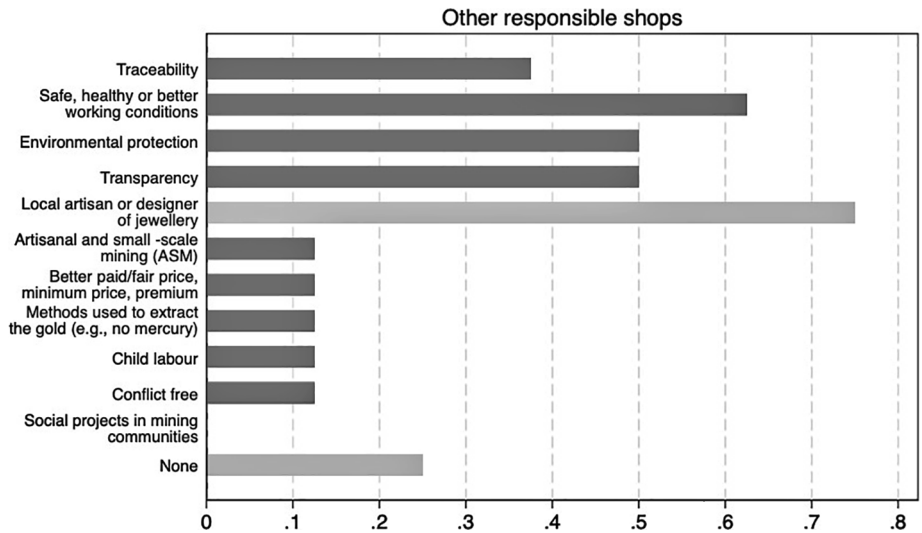
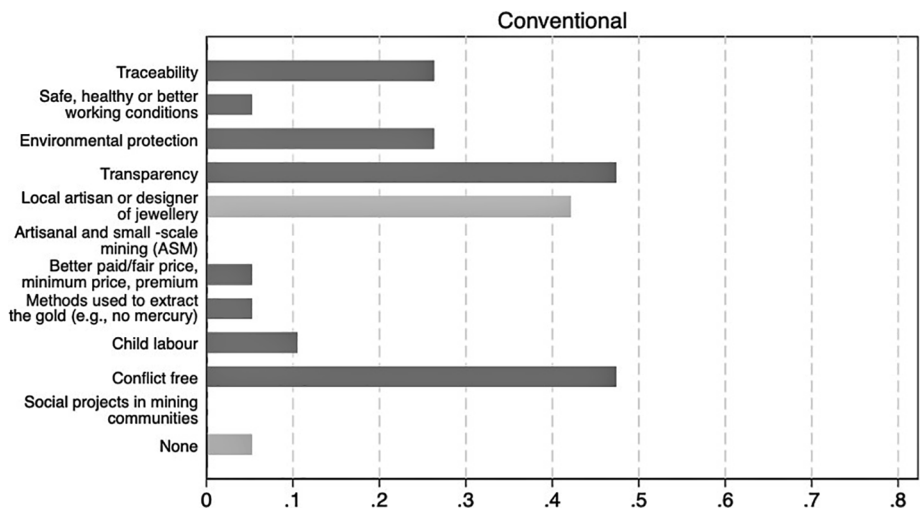


Figure 3.5



Notes: Sample restricted to jewellers who said the jewellery is ethical or sustainable.

Table 4 analyses whether consumers needed to actively seek information about the sourcing of gold (Phase 4 in Figure 1). In more than 90 per cent of all shopping experiences, the mystery shopper had to ask for information about the geographical

origin of the gold (column 1). Apart from *Fairtrade/Fairmined* shops, mystery shoppers also had to actively ask whether the jewellery was made ethically or sustainably in about half of the shops – even though they had already asked about the origin of the mineral (column 2). Strikingly, in also more than 90 per cent of the shops, responsible sourcing would not have been discussed unless customers had explicitly asked about the origin of the minerals or whether the jewellery was ethically or sustainably sourced (column 3). To put this in perspective, out of the 82 shops, only six shops – five *Fairtrade/Fairmined* and one other responsible shop – actively informed customers from the outset that their gold jewellery was ethically or sustainably sourced without being prompted. This means that in a typical day-to-day interaction between jewellers and customers, the origin of the minerals or the ethical aspects of the jewellery is rarely discussed – even in shops that sell certified gold.

Of the 65 shop assistants who asserted their products were ethical or sustainable, around half still had to be actively asked afterwards whether the gold was ethically or sustainably certified. *RJC CoP* and *RJC CoC* shops required significantly more probing about their certifications (column 4) than even conventional shops, where assistants often mentioned recycled gold as an ethical or sustainable certification. This finding is consistent with Figure 2, which shows that *RJC* shop assistants were unable to communicate their *RJC* affiliation to the consumer, even when actively asked about certification. However, there were no statistically significant differences between the different types of shops about probing needed to explain the meaning of ‘sustainable’ or ‘ethical’ (column 5): about half of the shops had to be probed for such information (column 5), even after they had already been asked whether the jewellery was responsibly sourced and certified.

Table 4: Necessity of probing to obtain responsible sourcing information

	(1)	(2)	(3)	(4)	(5)
	Origin of the gold/min- erals	Jewellery is ethical or sustainable	Initiate discussion about responsible sourcing	Jewellery is certified (ethical/ sustainable)	Meaning of ethical or sustainable
Reference category: Conventional shops					
Fairtrade/ Fairmined	-0.143 (0.097)	-0.509*** (0.116)	-0.357*** (0.132)	-0.173 (0.148)	-0.079 (0.182)
RJC CoC	-0.100 (0.098)	0.119 (0.175)	0.000 (.)	0.462** (0.182)	-0.023 (0.209)

RJC CoP	-0.053 (0.053)	-0.002 (0.148)	0.000 (.)	0.418** (0.163)	-0.179 (0.177)
Other re- sponsible shops	-0.125 (0.121)	-0.331* (0.183)	-0.125 (0.121)	0.184 (0.215)	-0.204 (0.214)
Constant (mean of conven- tional)	1.000*** (0.000)	0.581*** (0.091)	1.000 (.)	0.316*** (0.111)	0.579*** (0.118)
Observations	82	82	82	65	65
R ²	0.055	0.183	0.265	0.238	0.026
Mean	0.939	0.476	0.927	0.462	0.492

Notes: This table presents Ordinary Least Squares (OLS) regression results. Conventional shops are the comparison group. The dependent variables are as follows. Column 1: The shopper needed to ask about the origin of the minerals (1=yes, 0=no). Column 2: The shopper needed to ask whether the jewellery is ethical or sustainable (1=yes, 0=no). Column 3: The shopper needed to initiate a discussion about responsible sourcing by asking about the origin of the mineral or whether the jewellery is ethical or sustainable (1=yes, 0=no). Column 4: The shopper needed to ask whether the jewellery is certified for ethical or sustainable practices (1=yes, 0=no). Column 5: The shopper needed to ask about the meaning of ethical or sustainable for the miners and the environment (1=yes, 0=no). (.): Coefficient dropped due to perfect multicollinearity. The sample in columns 4 and 5 is restricted to shops that said the jewellery is ethical or sustainable. Robust standard errors are in parentheses. Significance levels: *p<0.1, **p<0.05, ***p<0.01.

Conclusion

While jewellers increasingly rely on voluntary standards for responsible gold sourcing, the impact of these certifications on making the sourcing of gold more transparent to consumers and, in turn, more ethical and sustainable in the long-term, remains unclear. Given that consumers are often unable to discern the ethical and environmental standards of gold jewellery, and because consumers rarely buy jewellery, the role of retailers in communicating information on the sourcing practices of gold is key.

Our mystery shopping study in Switzerland (with 82 shops) shows that while about 80 per cent of shops claimed that their jewellery was ethical or sustainable, only a small fraction of these shops knew the origin of the gold they sold and could

talk effectively about certification and the meaning of ethical and sustainable sourcing. The exception was shops that either sell *Fairtrade* or *Fairmined* gold jewellery. In contrast, *RJC*-certified shops showed a notable knowledge gap, with sales assistants often unable to communicate their *RJC* affiliation, nor provide information on the origin or sourcing practices of the gold. Additionally, sales assistants in *RJC*-affiliated shops demonstrated limited knowledge of the meaning of ethical or sustainable sourcing, similar to conventional shops.

Moreover, many jewellers do not actively display information about sourcing practices, and over 90 per cent would not have initiated a discussion about gold sourcing and its social and environmental responsibility, with the exception being *Fairtrade*/*Fairmined* shops.

Overall, retailers appear reluctant to proactively promote or discuss responsible sourcing. Mystery shoppers noted anecdotally that some jewellery shop owners mentioned using responsibly sourced gold only to uphold their personal moral standards. As a result, there is a significant onus on consumers to actively seek information and ask the 'right' questions – but questions that shop assistants still often cannot effectively answer. However, some shop assistants also mentioned that this was the first time anyone had asked about the origin of the gold. Therefore, while consumers appear increasingly concerned about the harmful effects of mining, they do not seem to ask about responsible sourcing practices when buying jewellery.

While the use of a mystery shopping technique prevented social desirability bias and the Hawthorne effect, there are some limitations of this method for social science research. First, our correlational study does not allow for a causal analysis of the impact of certification on retailers' communication and knowledge. This would require an experimental design. Second, the mystery shopper methodology relies on memory and, to some degree, on the interpretation of the mystery shopper to complete the post-visit questionnaire. Third, because the stores were visited only once to avoid any spillover or learning effects, the information gathered is, to some extent, dependent on the specific shop assistant encountered rather than reflecting the overall attitude of the retailer.

Our findings have wider implications for the ongoing debate about 'green washing' and 'social washing', where companies may overstate their environmental and social efforts [see Salter's, Marina et al.'s and Trasciani et al's chapter in this volume]. In this context, *Fairtrade*/*Fairmined* demonstrate their potential value in promoting greater transparency [see Anderson et al.'s chapter in this volume]. While significant knowledge gaps and lack of proactive communication persist among many retailers, *Fairtrade*/*Fairmined* shops exhibited a higher level of transparency and were better able to substantiate their responsible sourcing claims. However, these shops are niche and often only open by appointment, making them less accessible to casual shoppers. No mainstream shop would naturally initiate discussions about the ethical and sustainable attributes of their jewellery. As a result, the overall impact

of responsible gold certification on enhancing transparency among retailers still remains limited, highlighting the challenges of ensuring true transparency along the supply chain.

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