ARTICLES

Measuring the Growth of Gender-Inclusive Surveys Around the World

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As ideas about gender identity evolve, survey researchers around the world are working to understand how best to measure sex and gender in a way that is both accurate and inclusive. Emerging best practices differ widely between countries based on cultural and societal norms and the construction of language around gender. In this paper, we examine how survey creators have changed how they ask about gender in the past decade across 11 linguistically and culturally diverse countries. We measure the number of answer options included in gender questions created by SurveyMonkey users between 2012 and 2022. Our findings show that the number of gender questions with more than two answer options increased in all countries examined in our research. Canada, the United Kingdom, and Australia show the highest levels of gender questions with more than two answer options in 2022, while Egypt and Nigeria have the lowest levels.

Introduction

A growing share of people around the world no longer view gender as a binary between male or female. In the past decade in particular, the gender inclusivity movement brought terms such as "transgender," "non-binary," and "gender fluid" into everyday use. To keep up with those changes in cultural norms, survey researchers have changed how they ask questions about gender, too. While extensive research has been conducted on asking questions about gender identity, survey researchers have yet to land on a single best practice.

Here in the United States (U.S.), researchers have conducted extensive testing to determine best practices for asking questions about gender. While these best practices continue to evolve to keep pace with cultural norms, a few recommendations have emerged as clear best practices.

The Williams Institute, a think tank focused on gender and sexual orientation at the UCLA School of Law, specifies that sex refers to someone's biological traits (including "hormones, secondary sex characteristics, reproductive anatomy"), whereas gender is defined as "a multidimensional construct that has psychological, social, and behavioral dimensions that include gender identity and gender expression" (The GenIUSS Group 2014). Instead of conflating sex and gender, they (and others) recommend using a "two-step"

approach to asking about gender, first asking about someone's "sex assigned at birth," and then asking how individuals currently describe their gender identity. Their recommended language is the following:

> What sex were you assigned at birth, on your original birth certificate?
> Male
> Female
>
> How do you describe yourself? (check one)
> Male
> Female
> Transgender
> Do not identify as female, male, or transgender

A large-scale report from the National Academies' Committee on National Statistics validates this approach, saying the "two-step design is a clear improvement over previous 'Are you male or female?' measures" (National Academies of Sciences, Engineering, and Medicine 2022). The White House's Office of Management and Budget (Office of the Chief Statistician of the United States 2023) also references the two-step approach as the current best approach, while leaving room for more research to be conducted as social dynamics change. The two-step question has faced criticisms due to the potential for falsely identifying cisgender individuals as transgender. In some surveys (including the Census' Household Pulse Survey), a third follow-up question is asked to confirm responses to the first two questions in cases where the sex assigned at birth does not match the gender description, which can be useful in identifying such false positives (U.S. Census Bureau 2023). However, adding a third question about gender can increase respondent burden. Researchers have yet to find the perfect question or set of questions to accurately measure gender identity. Above all, they recognize the sensitivity of asking about sexual orientation and gender identity and the importance of treating personal data with care–even in a survey format.

Other countries have also explored, and begun to adopt, new survey questions about gender. The format and answer options in some countries differ significantly from U.S.-based recommendations due to cultural differences in the understanding of gender identity. Some examples of how other countries are addressing gender identity in surveys include:

> India: The Indian census has included "other" as a gender option since 2011 in an effort to measure those who identify as neither male nor female (Bhagat 2015).

United Kingdom: The 2021 UK census asked, "Is the gender you identify with the same as your sex registered at birth?" and gave respondents who selected, "No" the option to write in their gender identity (Office for National Statistics 2023).

Canada: Canada's 2021 census included one question on sex at birth and another on gender, with "male," "female," and "or please specify this person's gender:" as the answer options (Statistics Canada 2020).

Australia: Australia's national statistical standards advise including "non-binary" as a gender option (Australian Bureau of Statistics 2021) and that option was included on the 2021 census.

Argentina: In Argentina, the 2022 census included a gender question with the answer options "mujer trans/travesti (trans woman)," "varon trans/masculinidad trans (trans man)," "no binario (non-binary)," and "otra identidad / ninguna de las anteriores (other identity / none of the above)" (Insituto Nacional de Estadistica y Censos, n.d.).

Mexico: In Mexico, a recent government survey on sexual and gender diversity included the options, "tanto hombre como mujer (both male and female)" "ni hombre, ni mujer (neither male nor female)" and "de otro género (another gender)" (Instituto Nacional de Estadística y Geografía, n.d.).

Japan: In Japan, one study has suggested that the understanding of gender identity cannot be directly compared with that of Western societies, and recommends asking a three-step gender identity question involving questions around feelings of gender dysphoria (Hiramori and Kamano 2020).

This diversity of gender identity constructs makes it difficult to compare changes in gender identity measurement across countries, though one thing that most have in common is the addition of at least a third gender option. The impact of these changes is a major shift in how nongovernmental survey researchers ask about gender and sex and it is worth documenting that evolution from the default assumption that gender can only be binary to the current understanding that gender is a spectrum. The goal of this paper is to show that this change mostly took place over the 11-year period from 2012 to 2022. We use data from our own online survey platform, SurveyMonkey, which has the advantage of being the predominant survey platform globally during that time. In addition, we are uniquely positioned to examine user-created surveys, rather than expert-created surveys such as those that might

be developed at the Williams Institute or in the federal government, which means we are tracking real-time changes in colloquial expressions of gender and sex.

Methods

Our research team at SurveyMonkey analyzed all surveys taken on our platform from 2012 to 2022 in the U.S., the UK, Australia, the Netherlands, Brazil, India, Egypt, Canada, France, Nigeria, and Japan. The data were collected between January 2012 and December 2022. We identified user-generated surveys that included a gender question by searching for questions containing the words "male," "female," "woman," "man," or the applicable translations of those words, as answer options. For each gender question, we determined the number of answer options included. We then aggregated the results at the country level. Percentages were calculated by dividing the number of surveys with a gender question that had two, three, four, or five or more answer options by the total number of surveys containing a gender question in each country. All year-over-year changes mentioned in the text are statistically significant at a 95% confidence level.

Because of the diversity of gender-identity questions within and across countries, we chose to focus on the number of answer options rather than studying any specific gender identity question format, such as the two-step approach discussed in the introduction. In our analysis, the two-step question shown in the introduction would be categorized as a four-answer-option question ("male," "female," "transgender," and "Do not identify as female, male, or transgender"). However, in a subset of primarily English-speaking countries (the U.S., Canada, Australia, and the UK), we also examined the terms used in the answer options. We searched for keywords among the answer options, including "transgender," "non-binary," "non-conforming," and "other."

Data for the Netherlands include Dutch, data for India include Hindi, data for Brazil include Portuguese, data for Egypt and Nigeria include Arabic, data for France, Canada, and Nigeria include French, and data for Japan include Japanese.

Results

Recognition of non-binary gender options has seen a marked increase over the last decade across most countries included in this study. Most countries predominantly offered two gender options in 2012, with 22% of surveys fielded in the UK offering three or more gender options, followed by 21% in Canada. The U.S. and France trailed at 16% and 14%, respectively, while Australia (9%), the Netherlands (7%), India (7%), and Brazil (6%) remained in single digits. In Nigeria, only 5% of surveys that asked about gender, included three or more answer options in 2015, and virtually, no surveys (0%) in Egypt offered three or more answer options in 2014.

Table 1. Percent of surveys that ask about gender that include three or more gender options by country.

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2012 to 2022 change
Canada	21%	21%	22%	30%	37%	47%	58%	64%	70%	78%	80%	+59pp
n	5422	6392	7933	8884	10177	11451	11575	13911	14745	13943	11619	
United Kingdom	22%	24%	27%	30%	36%	46%	58%	66%	72%	77%	79%	+57pp
n	12049	16002	20154	26491	29308	30985	29632	38142	44376	36417	26108	
Australia	9%	12%	16%	22%	31%	42%	52%	58%	67%	75%	78%	+69pp
n	9325	11151	13932	16210	17592	18666	18466	24124	23987	17677	12623	
Japan	--	--	--	--	--	11%	15%	16%	23%	29%	31%	+20pp
n						4017	5176	7980	9825	11308	10712	(2022 vs. 2017)
United States	16%	16%	15%	22%	27%	31%	38%	48%	54%	62%	64%	+48pp
n	91157	115057	147176	117592	121937	114888	121398	130281	130055	112022	88897	
Netherlands	7%	5%	8%	6%	6%	12%	19%	36%	50%	56%	62%	+55pp
n	1532	2132	2675	3483	3959	4557	4545	5863	5642	4217	3052	
Brazil	6%	7%	7%	9%	7%	11%	18%	29%	40%	47%	52%	+46pp
n	736	1193	1634	2102	3573	4541	5767	7990	9830	7400	6364	
India	7%	12%	10%	12%	11%	14%	25%	34%	41%	45%	48%	+41pp
n	275	531	676	797	1209	1945	2648	4344	6980	5125	4047	
France	14%	16%	9%	11%	9%	13%	22%	22%	36%	40%	41%	+27pp
n	353	505	674	660	971	1507	1551	2489	2483	1962	1733	
Nigeria	--	--	--	5%	3%	4%	4%	10%	13%	13%	16%	+11pp (2022 vs. 2015)
n				175	311	314	470	639	1164	847	673	
Egypt	--	--	0%	1%	3%	2%	4%	8%	12%	10%	11%	+11pp (2022 vs. 2014)
n			131	224	320	514	412	1193	2127	1179	841	

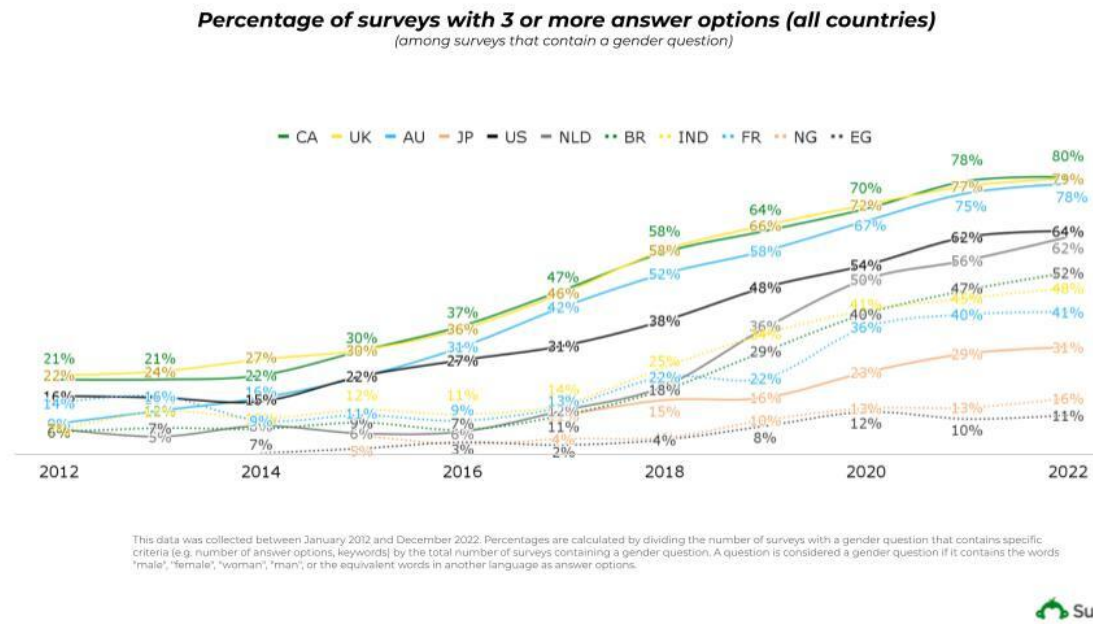– not available

n = number of surveys with gender questions

Figure 1. Percentage of surveys with three or more answer options (all countries)

The diversity of gender answer options has proliferated across nearly all countries: Canada, the UK and Australia currently have the highest level of adoption of gender questions with at least three answer options among the countries included in this study.
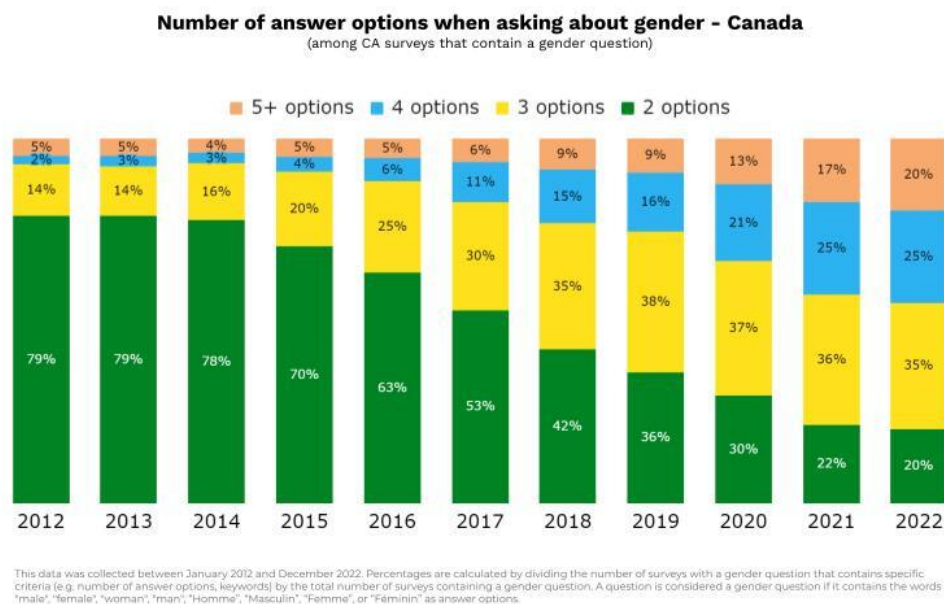

Figure 2. Percentage of surveys with three or more answer options (Canada)

By 2022, 80% of surveys in Canada that asked about gender included three or more options, an increase of 59 percentage points from 21% a decade prior in 2012. Adoption of non-binary gender options within the UK and Australia reached a similar proportion of surveys with gender questions with three or more gender options, at 79% and 78%, respectively.
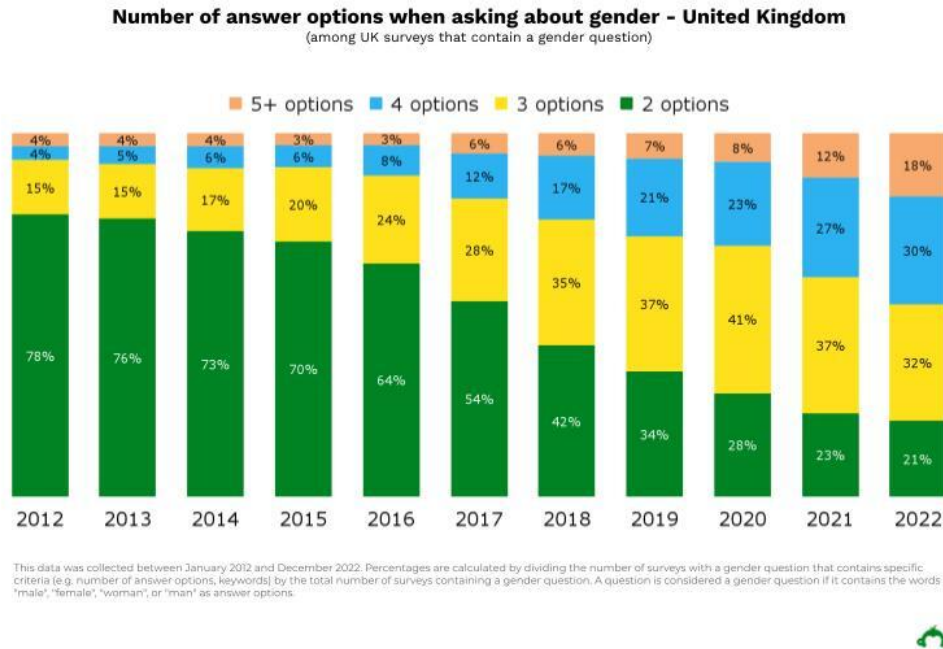

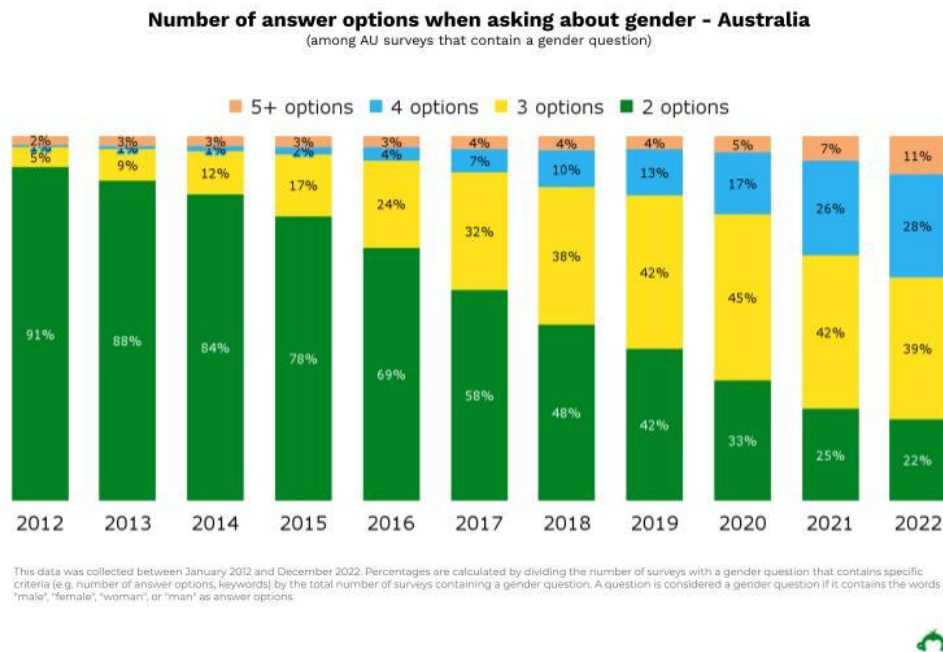Figure 3. Percentage of surveys with three or more answer options (United Kingdom)

Figure 4. Percentage of surveys with three or more answer options (Australia)

In the U.S., the usage of three or more gender categories within gender questions has quadrupled to 64%, seeing an increase of 48 percentage points from the 16% of surveys that contained a gender question incorporating three gender answer options in 2012.

Number of answer options when asking about gender - United States
(among US surveys that contain a gender question)

5+ options ■ 4 options ■ 3 options ■ 2 options

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
5+ options	3%	3%	3%	3%	4%	5%	6%	7%	10%	14%	16%
4 options	2%	2%	2%	3%	4%	6%	9%	12%	16%	20%	21%
3 options	12%	11%	10%	16%	18%	20%	23%	28%	29%	28%	27%
2 options	83%	84%	85%	77%	73%	69%	62%	52%	46%	38%	36%

This data was collected between January 2012 and November 2022. Percentages are calculated by dividing the number of surveys with a gender question that contains specific criteria (e.g. number of answer options, keywords) by the total number of surveys containing a gender question. A question is considered a gender question if it contains the words 'male', 'female', 'woman', or 'man' as answer options.
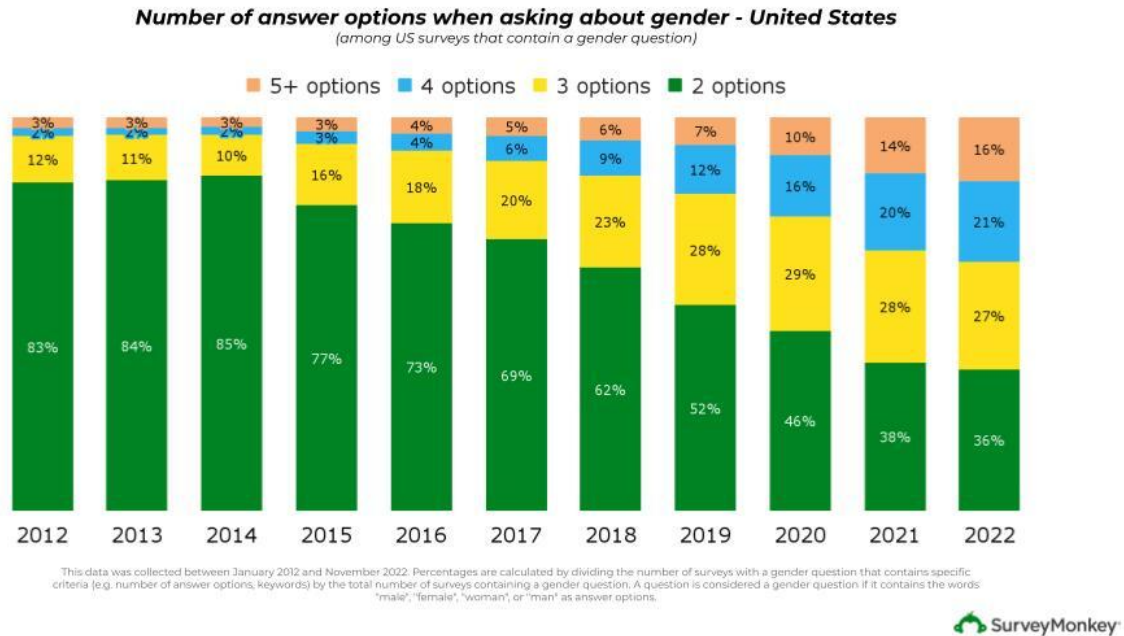
SurveyMonkey

Figure 5. Percentage of surveys with three or more answer options (U.S.)

The Netherlands' adoption of non-binary gender options is nearly on par with that of the U.S., with 62% including three or more gender options in 2022, up 55 percentage points from 7% in 2012. The country, however, falls behind other countries when it comes to surveys with four or more gender options. In 2022, 43% of surveys in the Netherlands included three options, but only 19% included 4+ options, about half as much as other countries, including 37% in the U.S., 48% in the UK, and 39% in Australia.

Number of answer options when asking about gender - Netherlands
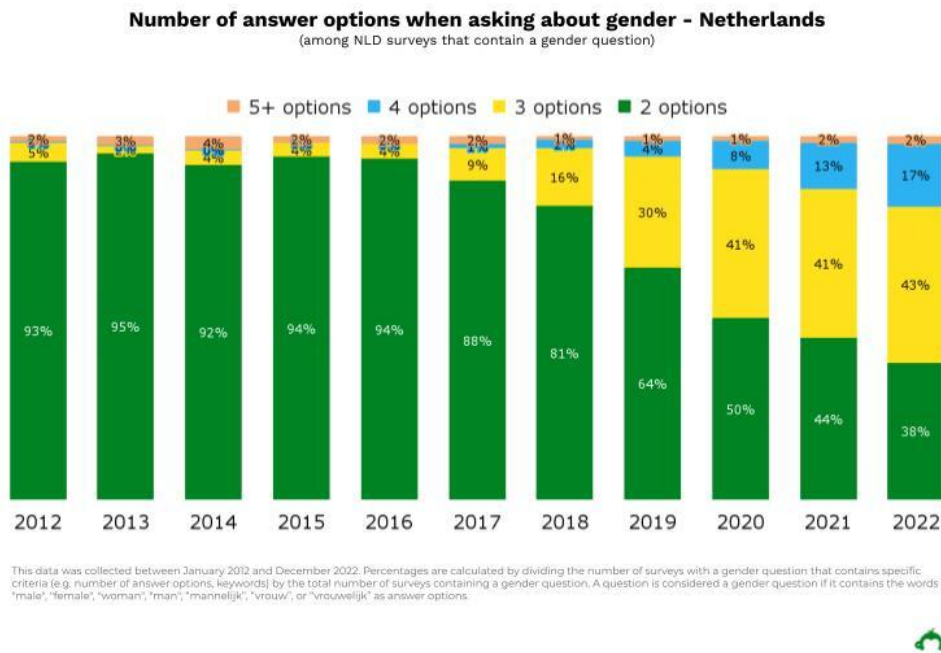(among NLD surveys that contain a gender question)

Figure 6. Percentage of surveys with three or more answer options (Netherlands)

In other parts of the world, the pace of adoption has been slow but steady over the past five or six years. In Brazil, 52% of surveys that ask about gender now include three or more options, up 46 percentage points from 7% in 2016.

Number of answer options when asking about gender - Brazil
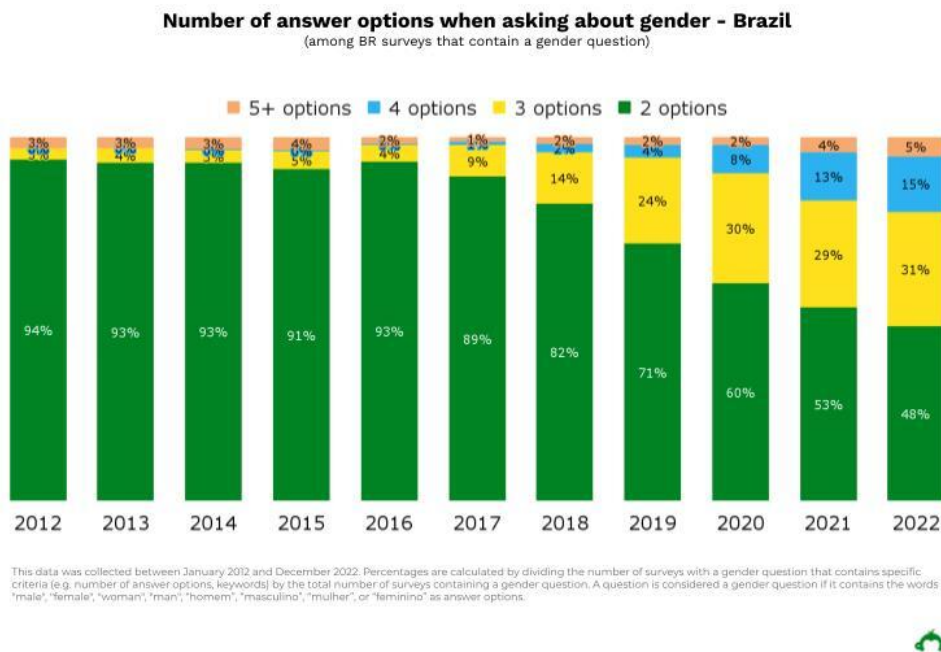(among BR surveys that contain a gender question)

Figure 7. Percentage of surveys with three or more answer options (Brazil)

A similar story plays out in India, where 48% of gender questions in 2022 included three or more gender options, up 41 percentage points from 7% in 2012. In France, 41% of gender questions in 2022 included three or more answer options, up 32 percentage points compared with 9% in 2014. Japan slightly trails France, with 31% of gender questions containing three or more gender options in 2022, up 20 percentage points from 11% in 2017.
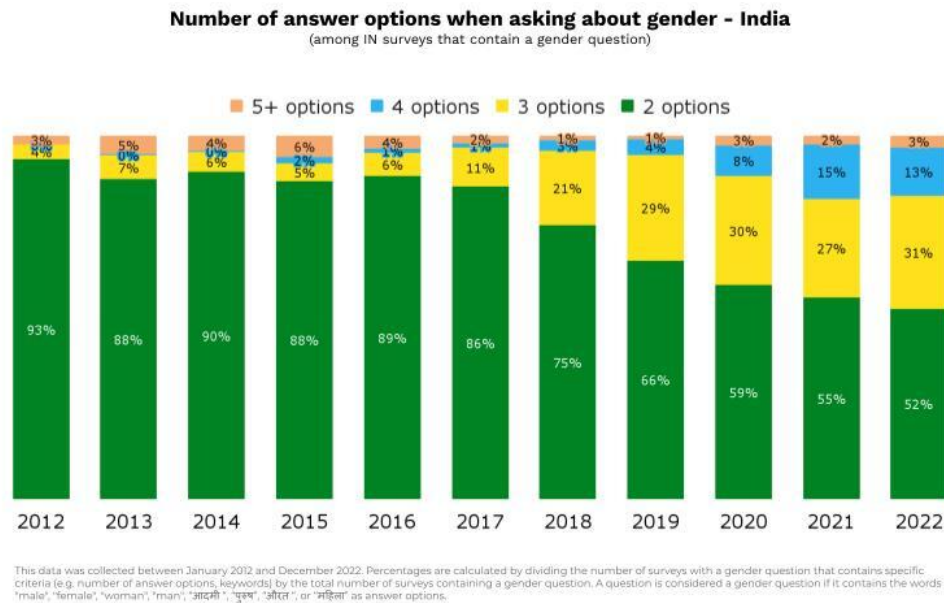
Figure 8. Percentage of surveys with three or more answer options (India)
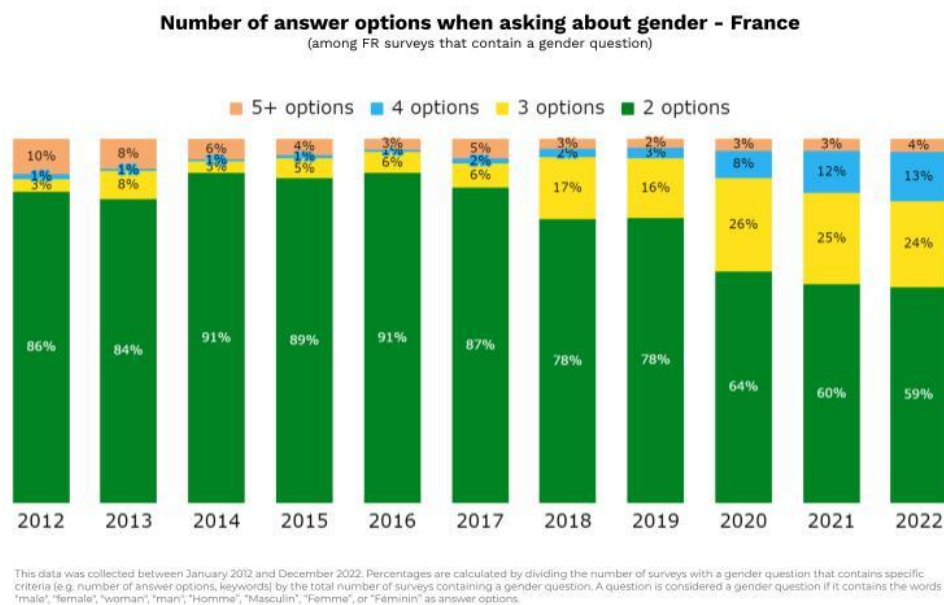
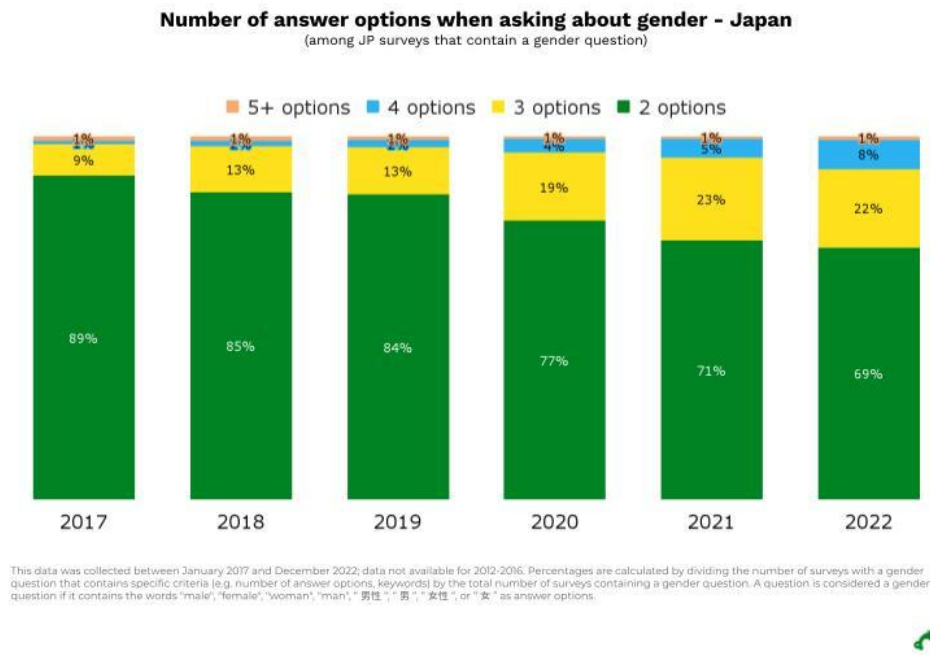Figure 9. Percentage of surveys with three or more answer options (France)

Figure 10. Percentage of surveys with three or more answer options (Japan)

Of the countries we examined, Egypt and Nigeria have been the slowest to pick up additional gender options. Between 2014 and 2018, the percentage that included three or more gender options hovered around 0% to 5% in both countries. In 2022, about 11% included 3+ options in Egypt and 16% in Nigeria. In 2022, the vast majority of surveys taken in either country had gender questions with just two answer options.
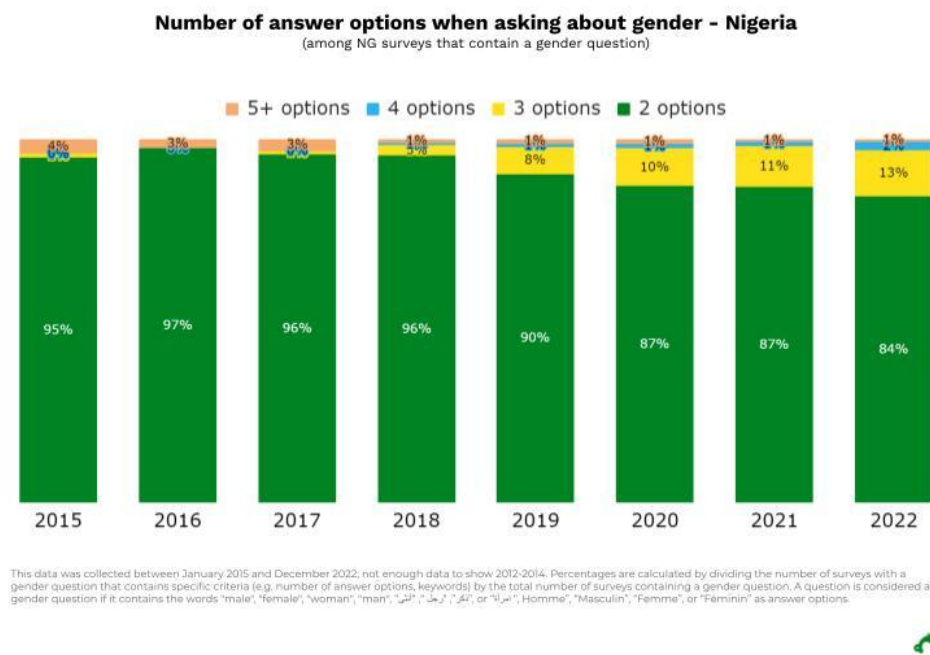

Figure 11. Percentage of surveys with three or more answer options (Nigeria)

Number of answer options when asking about gender - Egypt
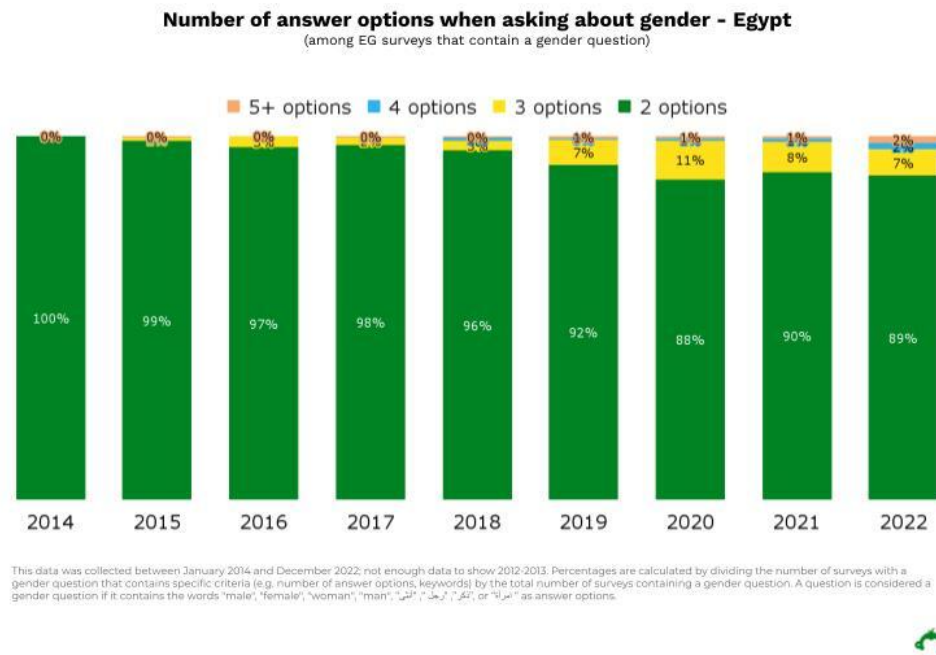(among EG surveys that contain a gender question)

Figure 12. Percentage of surveys with three or more answer options (Egypt)

Despite the variance in adoption rates of non-binary gender answer options, the increased usage of inclusive gender questions continues to grow across all countries, albeit at different rates.

The language of gender inclusivity within answer options among gender questions with three or more options has also witnessed a shift from usage of "other" to "non-binary" or "non-conforming" answer options, highlighting the changing language of gender classification within surveys.

In the U.S., "non-binary" or "non-conforming" nearly doubled in usage from 2020 to 2021, from 18% to 28%, while "other" saw a decline from 28% to 21%. By 2022, 33% included "non-binary" or "non-conforming" as an option, 21% included "other," and 11% included "transgender." In Canada, 32% included "non-binary" or "non-conforming" and 20% included "other," a reversal from 2020, where "non-binary" or "non-conforming" trailed "other" 17% to 30%. In Australia, "non-binary" or "non-conforming" answer options saw nearly identical levels of usage as "other," at 32% and 33% in 2022 respectively, compared to 21% and 39% in 2021. Surveys within the UK saw an identical trend, with "non-binary" or "non-conforming" at 32% and "other" at 30% in 2022, compared to 24% and 33% the previous year. "Transgender" as an answer option saw little to no growth in either Australia or the UK, only reaching 4% of all surveys with three or more gender options in Australia in 2022, a slight uptick from 2% in 2021. Similarly, in the UK, 7% of surveys with a gender question with three or more answer options used "transgender" in 2022, nearly unchanged from the 5% in 2021.

Table 2. Non-binary gender answer options among surveys containing gender questions with three or more options.

		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
United Kingdom	Transgender	14%	10%	12%	10%	9%	9%	7%	4%	4%	5%	7%
	Non-binary or non-conforming	0%	0%	0%	1%	2%	4%	8%	10%	13%	24%	32%
	Other	11%	11%	16%	17%	21%	23%	30%	35%	38%	33%	30%
Australia	Transgender	8%	6%	7%	7%	5%	5%	4%	3%	2%	2%	4%
	Non-binary or non-conforming	0%	0%	1%	1%	1%	3%	5%	6%	9%	21%	32%
	Other	24%	25%	29%	30%	39%	42%	40%	43%	47%	39%	33%
United States	Transgender	24%	24%	22%	19%	18%	16%	12%	9%	9%	11%	11%
	Non-binary or non-conforming	0%	0%	0%	1%	2%	4%	8%	12%	18%	28%	33%
	Other	22%	23%	30%	31%	33%	35%	29%	30%	28%	21%	21%
Canada	Transgender	8%	10%	7%	7%	8%	6%	6%	5%	6%	7%	8%
	Non-binary or non-conforming	0%	0%	0%	1%	1%	4%	11%	15%	17%	28%	32%
	Other	26%	22%	26%	27%	34%	30%	29%	28%	30%	24%	20%

Discussion

Across the world, people have been describing their gender in myriad ways for as long as the social construct of gender has existed. Nevertheless, accurately measuring gender identity—capturing people's intended gender expressions—has posed significant challenges, particularly as a growing number of individuals in the U.S. and elsewhere adopt less rigid gender identities (Geiger and Graf 2019). As other researchers, including the authors of a previous Survey Practice piece note, the usage of sex as a proxy for gender identity can leave explanatory power on the table when it comes to predicting political attitudes (Cassino 2020). Yet, as the authors note, more nuanced gender identity items may contribute to respondent fatigue particularly for already lengthy interviews. Our results show that despite these and the other challenges facing researchers asking about gender identity, the survey world is undoubtedly moving toward more inclusive and diverse gender identity questions.

We note some limitations in our study. First, we are extrapolating trends based only on surveys fielded on the SurveyMonkey platform. Reassuringly, however, our findings mirror the adoption of practices by other major survey research firms including the Pew Research Center (Amaya, Vogels, and Brown 2020). Second, we are unable to comprehensively speak on all cross-national trends due to the small sample size of surveys for some countries; as the adoption of online survey research globally spreads, future work would do well to reexamine these trends with greater sample sizes. A similar limitation exists for the relatively sparse number of languages evaluated here. Finally, we are unable to explain what causes the adoption of more gender-inclusive items on surveys over time and across countries. One possibility is the global diffusion of broadly changing norms and increasing acceptance of diverse forms of gender expression; another may be cultural factors specific to each context such as the extent of gender neutrality baked into language of the survey respondent or creator (Tavits and Pérez 2019).

Further research is needed to understand the full spectrum of terms used to describe different gender identities as well as sexual orientation in other languages. One possibility to better accommodate the complexity of respondents' gender identities without compromising on standardization or user experience may be the usage of multistep questions in order to pinpoint the best option in a set.

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Appendix

Table 3. Year-over-year change in percentage of surveys with three or more gender options

	CA	UK	AU	JP	US	NLD	BR	IND	FR	NG	EG
2012-2013	0%	1%	4%**	--	0%	-2%	1%	6%	2%	--	--
2013-2014	1%	3%**	4%**	--	-1%**	3%	0%	-2%	-7%	--	--
2014-2015	7%**	3%**	6%**	--	7%**	-2%	2%	2%	2%	--	--
2015-2016	7%**	6%**	9%**	--	5%**	1%	-2%	-1%	-2%	-3%	2%
2016-2017	10%**	10%**	11%**	--	4%**	6%**	4%	3%	4%	2%	-1%
2017-2018	11%**	12%**	10%**	4%*	7%**	7%**	7%**	11%**	9%*	0%	2%
2018-2019	6%**	7%**	7%**	1%	10%**	17%**	11%**	10%**	0%	5%	4%
2019-2020	6%**	6%**	9%**	7%**	6%**	14%**	11%**	7%**	15%**	3%	4%
2021-2022	8%**	5%**	8%**	5%**	8%**	5%**	7%**	3%*	4%	0%	-2%
2021-2022	1%*	2%**	3%**	2%	2%**	7%**	5%**	3%	1%	3%	1%

* p-value <0.05

** p-value <0.01

– not available