

**Report**

# **Discussion paper: Demographic and labour force implications of high migration events scenarios**

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## Abstract

This report summarises the main results and findings from the model-based scenarios of high migration events into the EU+ (EU27, the United Kingdom, Iceland, Norway and Switzerland). We have tested the impact of several sets of high-migration events potentially occurring during 2025–29, either as an one off shocks lasting one calendar year, or an initial shock followed by persistently persistence in immigration of person from a given region for a decade, albeit of gradually declining volume in each subsequent year higher immigration for a decade following the initial shock. These events were implemented independently for flows from seven different world regions – Other Europe, North Africa, Sub-Saharan Africa, Latin America, West Asia, South & South-East Asia, and East Asia – into the EU+ countries. The high migration events scenarios are conceived to illustrate and quantify impacts of high migration events into the EU+ countries against the Baseline scenario. As one might expect, the short impact for a duration of a single calendar year does not leave any lasting imprint on future population sizes and structures. Once-in-a-decade events do not generate sufficiently large flows to leave any sizeable imprint on destination populations. High-migration events that persist over time – for example, through family reunifications, migration networks or newly established migration opportunities – can increase the working-age population and labour force sizes in countries with existing diaspora, but mainly when these events arise in the regions of the world with established migration links to the destination country. What our results show, however, is that although population ageing is inevitable the decline in labour force is not. Most, but not all, EU+ countries will face working-age population decline, but the labour force would decline at a lesser pace or may not decline at all once we consider the continuing education expansion and trends in labour force participation.

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## 1. Introduction

This report summarises the main results and findings from the model-based scenarios of high migration events into the EU+ (EU27, the United Kingdom, Iceland, Norway and Switzerland, referred to as EU+ in this report). Migration is a key component of demographic change in low fertility European societies. Microsimulation model enables us to capture and model population heterogeneity by taking into account differentials in demographic behaviors between native-born and immigrants and by socio-economic status (proxied by educational attainment). We can, thus, assess demographic impacts of different migration scenarios. In addition to that, we go beyond demographic implications of future migration and can assess also impacts on future labour force and its composition because the EU-Labour Force Survey (EU-LFS) allowed for the analysis and incorporation of differentials in labour force participation by age, sex, educational attainment and place of birth into the modelling. We, thus, account for cohort trends in educational expansion and labour-force participation among the native-born and foreign-born.

While our previous work only differentiated between the EU-born and non-EU-born (Lutz et al. 2019, Marois et al 2019b), in QuantMig we account for the diversity within the foreign born. Because QuantMig-Mic takes into account differential emigration rates by place of birth, we could model future composition of European populations by place of birth and nativity status. This is important given that the so-called superdiversity (Vertovec 2023) is one of the most prominent transformations happening in European societies. Microsimulation approaches are well suited for modelling such diversity in long-term perspective (Bélanger et al. 2019). In this report we investigate to what extent high-migration events alter the size, proportion and composition of foreign-born.

For the sake of brevity, this report does not include a section on methods and data used in the modelling. A full documentation of the QuantMig-Mic microsimulation population projection model for 31 European countries, its modules, parameters, assumptions and the details of technical implementation of the QuantMig migration scenarios is available from Marois et al. (2023). The model code and all scenarios are publicly available in Zenodo repository under "QuantMig microsimulation population projection model and migration scenarios for 31 European countries" (Potančoková et al. 2023b) as of August 2023, DOI: 10.5281/zenodo.7728049. In addition to Zenodo repository, users can explore granular results of 15 QuantMig scenarios (Baseline and 14 scenarios of high-migration events) in a user-friendly and visually attractive manner through [QuantMig Migration Scenarios Explorer](http://www.quantmig.eu/data_and_estimates/scenarios_explorer) at [http://www.quantmig.eu/data\\_and\\_estimates/scenarios\\_explorer](http://www.quantmig.eu/data_and_estimates/scenarios_explorer).

First, we introduce QuantMig migration scenarios and then present their impacts on total population size (section 3.1), working-age population and total labour force (section 3.2), population age composition and dependency ratios (section 3.3) and on the dynamics of change of foreign-born population in European societies. We conclude with a brief summary and discussion of the main findings.

## 2. High Migration Events Scenarios

The scenarios presented in this report vary in their assumptions on international immigration, predominantly in terms of the numbers of international immigrants (flows) from the rest of the world regions into the EU+ countries. Higher immigration from the rest of the world also means that more persons born outside the EU+ move between the countries in EU+ system (for more details on the mechanism and modelling of emigration see Marois et al. 2023). All scenarios share the same assumptions on fertility, mortality, educational and labour force participation trends at the individual level (again, the details are explained in Marois et al. 2023). Because the place of birth is a source of heterogeneity for demographic behaviours,

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assumptions made on immigration impact aggregated components (total fertility rate, total labour force participation, etc.), hence the variation in the resulting rates and number of events in different migration scenarios.

QuantMig migration scenarios share the same demographic and labour force assumptions, which consider differences between the native-born and different groups of foreign-born. All scenarios share migration assumptions for 2020-2024 and differ in immigration from seven rest of the world regions - East Asia, Latin America, North Africa, Other Europe, Sub-Saharan Africa, South and South-East Asia and West Asia<sup>1</sup> – starting from 2025-2029 period. When conceptualising QuantMig migration scenarios, the COVID-19 pandemic was leaving its trace on international migration (González et al. 2023) and the war against Ukraine erupted in February 2022, immediately profoundly changing migration flows from Eastern Europe into the EU+ countries. The number of displaced Ukrainians who crossed EU borders exceeded by far the number of Syrian and Iraqi refugees who arrived in 2015-2016. The experiences of past high migration events into EU+ have confirmed that we need to set migration assumptions with respect to origin countries and regions rather than for gross immigration flow into the EU+ from the rest of the world.

The **high migration events scenarios** are conceived to illustrate and quantify impacts of high migration events into the EU+ countries against the Baseline scenario. The **Baseline scenario** envisages continuation of the past migration trends from 2011-2019 into future and alternative scenarios of high migration events modify migration assumptions from 2025-2029 onwards. Each high migration event scenario modifies immigration assumption for immigration flow from one specific world region while immigration flows for other world regions into the EU+ countries remain the same as in the Baseline scenario.

In the **Baseline scenario**, immigration from the rest of the world regions into the EU+ countries continues with the same intensity (not in terms of numbers but in terms of rate) as in the second decade of 21<sup>st</sup> century and immigrants from the eight world regions will be attracted mainly towards those EU+ countries where compatriots from that given region have already migrated to in the past, and where the existing migration networks can therefore support them. We also assume that the war against Ukraine will continue beyond 2023 and the combat will cease by 2025, resulting in return of 60% of the refugees back to Ukraine<sup>2</sup>. This baseline inflow (without the additional immigration of refugees from Ukraine) has been derived by applying the average emigration rate into the EU+ country from Other Europe. The estimation of the average emigration rates into the EU+ counties is explained in Marois et al (2023, page 28). The resulting immigration flows of the Baseline scenario (including the migration from Ukraine in 2020-24) are presented in Table 1. The projected immigration flows from Other Europe region for 2020-2024 are triple the than the projected flow derived from the average emigration rate in 2025-2029. The overall immigration into the EU+ from the rest of the world in 2020-24 is thus by 25% higher than the projected values for 2025-2029.

The projected immigration flows into the EU+ are derived using the emigration rate from the world regions because the migration decisions are made in the countries of origin. As young adults normally have the highest propensity to migrate, we wanted to capture the potential impacts of diverging projected demographic dynamics in different world regions on potential number of immigrants into the EU+. This is well captured in rate-based scenario. Table 1 illustrates that projected immigration volumes from demographically growing and

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<sup>1</sup> The world regions are determined by the classification used the EU-LFS 2012-2019 COUNTRYB variable: Europe Outside EU-28 and EFTA (includes Turkey, Russian Federation and other Eastern European countries); North Africa; Other Africa; Near Middle East; East Asia; South South-East Asia; North America & Australia Oceania; Latin America. For the country grouping for each region see the EU-LFS documentation: <https://ec.europa.eu/eurostat/documents/1978984/6037342/Country-codification-from-2012-onwards.pdf>

<sup>2</sup> We apply net inflows of Ukrainian refugees and add them into the immigration flows for Other Europe region for 2020-2024 period only.

young regions increase towards 2060, for example the projected number of immigrants from Sub-Saharan Africa nearly doubles between 2020-24 and 2055-59, followed by 25% increase for immigration from Northern Africa and 14% increase from West Asia. In contrast, immigration volumes from regions with ageing populations, i.e. older age structures in the future as compared to 2020, reflect the declining pool of highly-mobile young adults. East Asia is a good example, with the projected immigration declining by 40% between 2020-24 and 2055-59.

**Table 1: Assumed total immigration flows from the world regions into the EU+ in the Baseline scenario**

Total immigration from:	2020-24	2025-29	2030-34	2035-39	2040-44	2045-49	2050-54	2055-59
Other Europe	5,140,112	1,669,511	1,699,076	1,805,692	1,801,092	1,662,969	1,483,465	1,365,750
North Africa	929,664	965,206	1,053,874	1,161,001	1,222,826	1,218,038	1,181,374	1,163,108
Sub-Saharan Africa	1,659,728	1,961,478	2,143,433	2,402,594	2,619,129	2,786,751	2,926,193	3,062,040
West Asia	1,465,786	1,491,034	1,575,084	1,674,694	1,729,596	2,040,755	1,700,498	1,677,060
South & South-East Asia	2,074,641	2,123,791	2,154,011	2,159,123	2,146,626	2,112,087	2,070,893	2,016,878
East Asia	832,160	734,951	711,126	704,760	673,467	613,848	547,250	496,276
Latin America	1,871,965	1,868,969	1,845,690	1,823,424	1,850,264	1,818,550	1,719,318	1,654,183
North America + Oceania	1,298,363	1,035,354	1,005,251	995,669	992,730	988,946	979,947	960,490
<b>Total into EU+</b>	<b>15,272,419</b>	<b>11,850,294</b>	<b>12,187,544</b>	<b>12,726,958</b>	<b>13,035,730</b>	<b>13,241,945</b>	<b>12,608,937</b>	<b>12,395,784</b>

High migration events, of the kind of the 2015-2016 migration from Syria or more recently sizeable migration from Ukraine after the Russian invasion, are impossible to foresee in terms of their onset, scale, duration and in terms of how many people will return or settle in what destinations (Bijak and Czaika 2020). This unpredictability of the drivers and their effects on actual migration towards Europe nudges us to take a different approach.

To illustrate the implications of potential high immigration events, we have developed a set of model-based scenarios anchored in statistical modelling and theory of extreme values (Bijak 2023). We can simulate such situations in scenarios to inform greater preparedness and contingency planning by outlining the potential impacts. The impacts will depend not only on the magnitude (how many migrants will come), but also on their regions of origin, which differ in terms of the characteristics of their populations (who will come). Both when and where from are hard to predict even in short-term, but once signal data are available migration events can be nowcast (Barker and Bijak 2022). Our scenarios simulate high migration events that differ in term of origin of the immigration, the magnitude and the duration.

With respect to the magnitude, we pioneer the use of quantiles from Pareto distribution corresponding to once-in-a-decade and twice-in-a century frequency of occurrence of the migration event (Bijak 2023). Bijak's statistical estimates are informed by the past immigration flows from eight world regions into EU+. For the scenario setting we have selected posterior means of the quantiles  $q_{0.9}$  (corresponding to once-in-a-decade frequency of occurrence) and  $q_{0.98}$  (corresponding to twice-in-a-century frequency of occurrence) from the Pareto distributions fitted to the median QuantMig flow estimates for 2009–2019 (Aristotelous et al. 2022). As for the timing of the event, for simulation purposes we choose period of 2025-2029.

With respect to duration of an immigration event we simulate two contrasting situations. First, we suppose a duration of a single year – an one-off influx of immigrants corresponding to “migration event” and “high migration event” in magnitude. After one calendar year the migration from that particular region goes back to projected immigration follows as in the baseline scenario. We term this set of scenarios “short migration events”.

The second situation envisages that higher numbers of immigrants would be arriving during the decade after a high-migration event has taken place as a result of chain migration, family reunifications, established migration networks or prolonged crisis that gave rise to migration event in the first place. After ten years, the additional migration 'wave' vanishes and immigration flows return to levels observed in the baseline scenario. We term this set of scenarios "persistent migration events".

This leaves us with four sets of scenarios to simulate: short once-in-a-decade migration events from 7 world regions, once-in-a-decade events from 7 world regions with persistence, short twice-in-a-century events from 7 world regions, and twice-in-a-century events from 7 world regions with persistence. We model in total 28 scenarios of migration events, as summarized in Table 2.

**Table 2: Assumption setting for the 28 scenarios of migration events into the EU+**

	<b>short event from:</b>	<b>event followed by persistence from:</b>
<b>Once-in-a-decade immigration</b>	Other Europe	Other Europe
	North Africa	North Africa
	Sub-Saharan Africa	Sub-Saharan Africa
	West Asia	West Asia
	South & South-East Asia	South & South-East Asia
	East Asia	East Asia
	Latin America	Latin America
<b>Twice-in-a-century immigration</b>	Other Europe	Other Europe
	North Africa	North Africa
	Sub-Saharan Africa	Sub-Saharan Africa
	West Asia	West Asia
	South & South-East Asia	South & South-East Asia
	East Asia	East Asia
	Latin America	Latin America

### **Short high-migration events**

Short high-migration events are immigration events from a given region into the EU+ countries with the *frequency of occurrence twice-in-a-century* (taking the modelled immigration corresponding to 98<sup>th</sup> quantile of Pareto distribution, Bijak 2023). Such events take place for one calendar year within the 5-year period 2025-2029. Immigration from all other world regions follows the baseline scenario. Before and after the extreme event immigration from the given region returns to the levels of the baseline scenario. Such an event can be an outcome of humanitarian or natural disasters with temporary migration and high probabilities of return which can be resulting from a speedy policy reaction to the crisis that provoked high immigration. We modelled seven short high-migration event scenarios corresponding to the seven regions of origin: Other Europe, North Africa, Sub-Saharan Africa, Latin America, West Asia, South & South-East Asia, and East Asia.

### **Short migration events**

A short migration event is an event from a given region with the *frequency of occurrence once-in-a-decade* (taking immigration flows corresponding to the 90<sup>th</sup> quantile from Pareto distribution), and this event takes place for 1 year within the 5-year period 2025-30. After this immigration event, immigration returns to those levels of the baseline scenario. We modelled seven short high-migration event scenarios corresponding to the seven regions of origin: Other Europe, North Africa, Sub-Saharan Africa, Latin America, West Asia, South & South-East Asia, and East Asia.



### *Persistent high migration events*

Persistent high-migration events are those where the initial short high-migration event from a given region, corresponding to the frequency of occurrence twice in a century, is followed by gradually diminishing migration inflows from that region for a decade. We simulate this situation by first imposing a “short high-migration event” from a given region in 2027, and then keeping immigration from that region high for a decade, but with the volume of immigrants declining in each subsequent year until it reaches the same values as in the baseline scenario at the end of the decade. The persistence in migration is envisaged because of the initial event’s migration network effects, family reunifications and chain migration, as well as due to persistence of migration drivers stimulating out-migration from the origin countries/areas. Elevated migration flows thus take place between 2027 and 2036. In practice, we use interpolated values between the two time points.

### *Persistent migration events*

Identical to the above, but the initial event from a given region has a once-in-a-decade frequency of occurrence. The persistence is also envisaged for a decade following the initial event in 2027. Migration volumes are lower and in practice obtained by interpolating values between the initial event and baseline scenario 10 years later. We modelled seven persistent high-migration event scenarios corresponding to the seven regions of origin: Other Europe, North Africa, Sub-Saharan Africa, Latin America, West Asia, South & South-East Asia, and East Asia.

**Table 3: Projected immigration into EU+ in the Baseline and migration events scenarios for the periods when migration events are implemented**

Scenario		Immigration volumes (millions)		
		2025-29	2030-34	2035-39
<b>BASELINE</b>		<b>11.9</b>	<b>12.2</b>	<b>12.7</b>
<b>Persistent high-migration event from:</b>	Other Europe	15.4	15.6	13.5
	North Africa	13.3	13.5	12.9
	Sub-Saharan Africa	14.3	14.5	13.0
	West Asia	15.0	15.1	13.1
	South & South-East Asia	14.5	14.6	13.0
	East Asia	13.0	13.3	12.9
	Latin America	14.9	15.0	13.1
<b>Persistent migration event from:</b>	Other Europe	13.6	13.9	12.9
	North Africa	12.8	13.0	12.8
	Sub-Saharan Africa	13.3	13.6	12.9
	West Asia	13.2	13.5	12.9
	South & South-East Asia	13.6	13.8	12.9
	East Asia	12.6	12.9	12.8
	Latin America	13.6	13.8	12.9
<b>Short high-migration event from:</b>	Other Europe	12.8	12.2	12.7
	North Africa	12.2	12.2	12.7
	Sub-Saharan Africa	12.3	12.2	12.7
	West Asia	12.7	12.2	12.7
	South & South-East Asia	12.4	12.2	12.7
	East Asia	12.1	12.2	12.7
	Latin America	12.6	12.2	12.7
<b>Short migration event from:</b>	Other Europe	12.2	12.2	12.7
	North Africa	12.0	12.2	12.7
	Sub-Saharan Africa	11.9	12.2	12.7
	West Asia	12.1	12.2	12.7
	South & South-East Asia	12.1	12.2	12.7
	East Asia	12.0	12.2	12.7
	Latin America	12.1	12.2	12.7

Projected country-specific immigration flows into the EU+, as well as immigration and emigration between the EU+ countries and emigrations into the rest of the world can be viewed in the Indicators page of the QuantMig Migration Scenarios tool at [http://www.quantmig.eu/data\\_and\\_estimates/scenarios\\_explorer/](http://www.quantmig.eu/data_and_estimates/scenarios_explorer/)

## 3. Results

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### 3.1 Impacts on population size

The Baseline scenario considers continuation of migration volumes into the EU+ which are comparable to those during the 2011-2019 and projects a very moderate decline in the EU+ population from 520 million in 2020 to 512 million in 2060. The projected decline is a bit more pronounced for the EU27 – by 5pp from the estimated 440 million in 2020 to 420 million in 2060. The EU+ decline is reduced because the UK population is projected to increase by 11pp from 81 to 92 million during the same time frame. Sweden would be (besides Luxembourg) the fastest growing population in the current EU27 (Table 4).

The projected population increases are strongest in countries which have experienced pronounced gains from international migration in the past and this trend translates into the future. Baseline scenario results in *projected strong population increase*, which we define as a relative change between 2020 and 2060 that exceeds 10pp, in the following 10 EU+ countries: Austria, Cyprus, Iceland, Ireland, Luxembourg, Malta, Norway, Sweden, Switzerland and the UK (in alphabetic order, for the actual values see Appendix Table A.1). *Moderate population increase*, within +1pp to +10pp relative change, is projected in the Baseline scenario in five countries: Belgium, Denmark, France, Germany and the Netherlands. *Moderate population declines*, within -1 to -10pp between 2020 and 2060 are projected in Czechia, Estonia, Italy and Slovakia; and *strong population declines* are projected in 11 southern and eastern EU27 countries: Bulgaria, Croatia, Greece, Hungary, Latvia, Lithuania, Poland, Portugal, Romania, Slovenia and Spain. More country-specific projected population stocks are available through the QuantMig Migration Scenarios Explorer at [http://www.quantmig.eu/data\\_and\\_estimates/scenarios\\_explorer/](http://www.quantmig.eu/data_and_estimates/scenarios_explorer/)

Can high migration events alter the trend projected by the Baseline scenario? As Table 4 shows for the EU27 and selected main destination countries of migrants from the rest of the world (and as Appendix table 1 shows for all 31 EU+ countries) *short migration events do not alter this projected trend*. The projected population sizes modelled in the short migration event scenarios are close to the Baseline and within the random noise of the model.<sup>3</sup>

Only Persistent high-migration events (migration events with twice-in-a-century frequency of occurrence and followed by persistence in migration a decade after the initial event) can somewhat alter the projected population decline or increase. For the EU27 three Persistent high-migration event scenarios – from Other Europe, West Asia and from Latin America - almost stabilise future population size (Table 4). The projected decline is reduced from -5pp to -3pp by 2060.

The impacts are more pronounced for the main destination countries and more sizeable only if these persistent events originate from world regions with the existing migration ties with the destination country.

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<sup>3</sup> The random noise is more pronounced in the results for countries with smaller populations, therefore only values that are above the random noise of the short migration event scenario should be considered as reliable enough of indicating an impact of a scenario onto the projected population sizes. There is no single cut off value or random noise for all countries but generally only valued which exceed those from Short migration event scenario should be considered as impactful. Results for very small countries like Luxembourg, Estonia or Iceland vary considerably and should be interpreted with caution.

We can consider as impactful those scenarios that add at least +2pp to the projected population decline as having some impact. Taking all 31 countries into account, the most impactful scenarios overall are Persistent high-migration event from Other Europe, which considerably alters the projected population change in 22 countries, followed by Persistent high-migration event from West Asia (considerable change in 11 countries). This is not surprising given that the extreme values from Pareto 98<sup>th</sup> quantile result in highest volumes for Other Europe, West Asia and Latin America. Persistent high migration event from Latin America makes an impact only for Spain, Portugal and to a very limited extend for Italy. Persistent high-migration event from North Africa and Sub-Saharan Africa makes a difference for France, and the latter also for Italy, Belgium and to lesser extend for Austria, Denmark and Finland. Persistent high-migration event from South and South-East Asia is impactful for the UK, Norway and to a lesser extent for Ireland and Switzerland. The largest overall impact is visible for Persistent high-migration from West Asia to Sweden, where that scenario adds +8.7pp to the already pronounced projected population growth.

Table 1 features some useful examples. In Spain the projected population can change from pronounced to moderate decline in case of migration events from Latin America, however, most scenarios do not result in a change of more than 1pp which is largely within the random noise of the model. Only Persistent high-migration event scenario reduces the projected decline more considerably (by +2.9pp) and alters the population size trend visibly (Figure 1).

In Denmark we see that all Persistent scenarios would have some small impact (we can consider as impactful those scenarios that add at least +2pp to the projected population decline as having some impact) but only Persistent high-migration from West Asia changes the projected population increase from moderate to strong.

As already mentioned, the overall greatest impact is of Persistent high-migration from West Asia to Sweden, where also the Persistent high migration event makes an impact on the projected population change by adding +3.5pp to the population growth projected in the Baseline scenario.

The comparison between the Persistent high-migration and Persistent migration event scenario from the same region also serves as sensitivity analysis of the simulated impacts. Scenarios of high migration events and migration events with persistence show some impact also for migration events from the regions with the strongest impact, i.e. from Other Europe and West Asia in case of Austria and Germany, or in case of Spain persistent events from Latin America. However, in other cases, such as for France or the EU27, the Persistent migration events show very similar results for all regions of origin and have rather small impact. Short-migration events do not have impact on projected total population sizes, which is not surprising given that modeled volumes are in the range of 500 thousand to 1.3 million. Although immigration of additional 1 million persons in a single calendar year is substantial, it is not a volume that change demographic trends even if we consider higher fertility levels of some immigrant groups.

**Table 4: Relative change in total population between 2020 and 2060 (100 = 2020) by scenarios, selected countries**

Scenario:	EU27	Sweden	Austria	Germany	Denmark	Spain	UK	France	Netherlands	Italy
<b>Baseline</b>	<b>95</b>	<b>139</b>	<b>111</b>	<b>102</b>	<b>107</b>	<b>89</b>	<b>111</b>	<b>106</b>	<b>102</b>	<b>92</b>
Persistent high-migration event from East Asia	96	140	113	103	108	90	112	107	102	92
<b>Persistent high-migration event from Latin America</b>	<b>96</b>	<b>139</b>	<b>112</b>	<b>103</b>	<b>108</b>	<b>92</b>	<b>111</b>	<b>107</b>	<b>103</b>	<b>93</b>
Persistent high-migration event from North Africa	96	140	112	103	108	91	111	<b>108</b>	103	93
<b>Persistent high-migration event from Other Europe</b>	<b>97</b>	<b>141</b>	<b>117</b>	<b>105</b>	<b>109</b>	<b>90</b>	<b>111</b>	<b>107</b>	<b>104</b>	<b>94</b>
Persistent high-migration event from South and South-East Asia	96	142	113	103	109	90	<b>113</b>	107	103	93
Persistent high-migration event from Sub-Saharan Africa	<b>97</b>	<b>142</b>	<b>113</b>	<b>103</b>	<b>109</b>	<b>90</b>	<b>112</b>	<b>108</b>	<b>103</b>	<b>94</b>
<b>Persistent high-migration event from West Asia</b>	<b>97</b>	<b>148</b>	<b>115</b>	<b>106</b>	<b>111</b>	<b>90</b>	<b>112</b>	<b>107</b>	<b>104</b>	<b>92</b>
Persistent migration event from East Asia	96	140	111	102	108	90	112	107	103	92
Persistent migration event from Latin America	96	140	112	103	109	91	111	107	103	93
Persistent migration event from North Africa	96	140	112	103	109	90	111	107	102	93
Persistent migration event from Other Europe	96	140	114	104	108	90	111	107	103	92
Persistent migration event from South and South-East Asia	96	141	113	103	109	90	112	107	102	93
Persistent migration event from Sub-Saharan Africa	96	140	113	103	109	90	112	107	103	93
Persistent migration event from West Asia	96	143	113	104	108	90	111	107	103	92
Short high-migration event from East Asia	95	140	112	102	107	90	111	107	102	92
Short high-migration event from Latin America	96	140	112	102	108	90	111	107	102	92
Short high-migration event from North Africa	96	139	112	102	107	90	111	107	102	92
Short high-migration event from Other Europe	96	140	112	103	108	90	111	106	102	92
Short high-migration event from South and South-East Asia	95	139	111	102	108	89	111	106	102	92
Short high-migration event from Sub-Saharan Africa	96	139	111	102	107	90	111	107	103	92
Short high-migration event from West Asia	96	140	112	103	109	90	111	106	102	92
Short migration event from East Asia	96	139	113	102	109	90	111	107	102	92
Short migration event from Latin America	95	140	112	102	108	90	111	106	102	92
Short migration event from North Africa	96	139	112	102	108	90	111	106	102	92
Short migration event from Other Europe	96	140	112	103	108	90	111	106	102	92
Short migration event from South and South-East Asia	96	140	112	102	108	90	111	106	103	92
Short migration event from Sub-Saharan Africa	96	140	111	102	107	90	111	107	102	92
Short migration event from West Asia	95	139	112	102	108	89	111	107	102	92
<b>Maximum (Max)</b>	<b>97</b>	<b>148</b>	<b>117</b>	<b>106</b>	<b>111</b>	<b>92</b>	<b>113</b>	<b>108</b>	<b>104</b>	<b>94</b>
<b>Difference between Max and the Baseline in percentage points (pp)</b>	<b>1.8</b>	<b>8.7</b>	<b>5.3</b>	<b>3.8</b>	<b>3.1</b>	<b>2.9</b>	<b>2.2</b>	<b>2.0</b>	<b>1.8</b>	<b>1.9</b>

Note: **Orange**=Strong decline (<90), **Yellow**=Moderate decline (≥90 to <99), **Green**=Moderate increase (>101 to ≤110), **Dark Green**=Strong increase (>110)

Results for all countries are presented in Appendix A Table A.1

Figure 1 illustrates trajectories of population change in Persistent high-migration events and Persistent migration events scenarios for the selected counties and showcases that only immigration events from regions with already established migration links to the selected destination country would have some limited impact on the projected population sizes. Countries in the Figure 1 were selected to illustrate diversity of impacts of persistent migration events from different world regions. In case of Germany, only Persistent high-migration events from West Asia and Other Europe and Persistent migration event from West Asia visibly elevates the projected population sizes, for Spain only Persistent high migration event and Persistent migration event from Latin America temporarily prevents population decline and elevates the projected population size. In some instances, Persistent migration scenario from can have same or greater impacts than Persistent high migration events from the world regions with lesser migration ties. Plots for all counties and including also plots for Short high migration events and Short migration events scenarios are available in Appendix B Figure B.1.

**Figure 1: Relative change in total population size in the Baseline, Persistent high-migration events (PHME) and Persistent migration events (PME) scenarios (2020 = 100), selected countries**

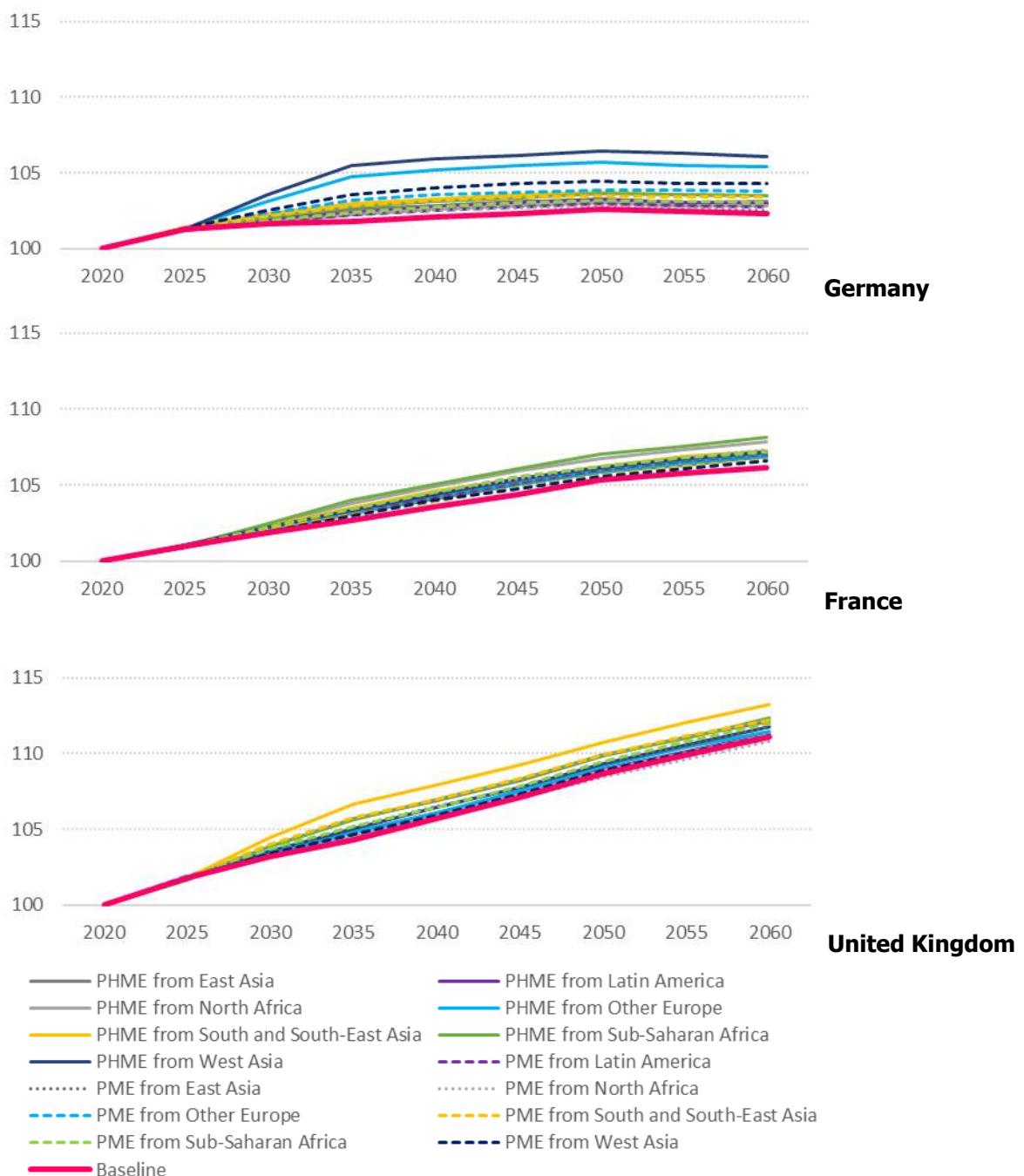
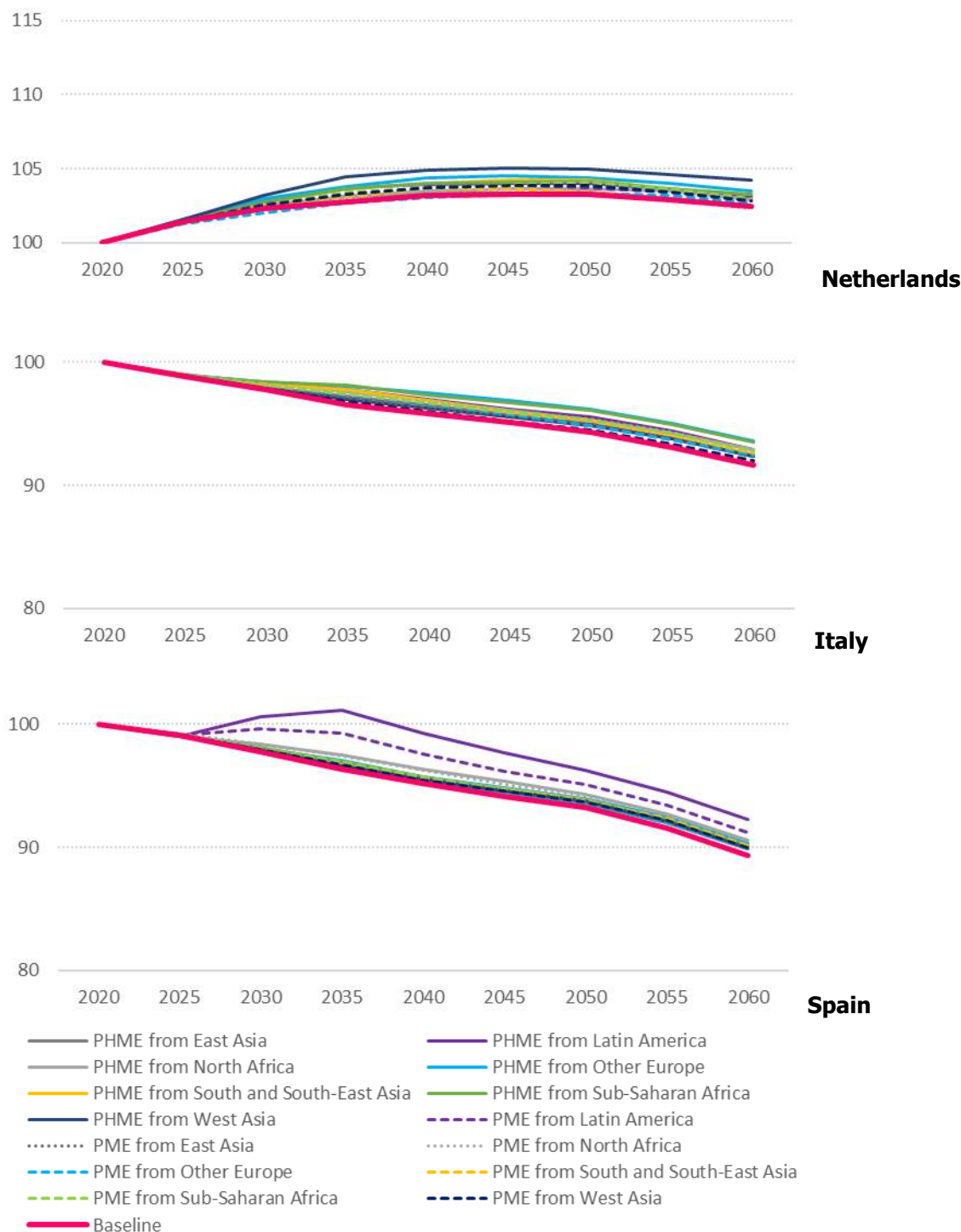


Figure 1 continued



Charts and maps depicting actual population stocks can be accessed in the interactive QuantMig Scenario Explorer at [http://www.quantmig.eu/data\\_and\\_estimates/scenarios\\_explorer/](http://www.quantmig.eu/data_and_estimates/scenarios_explorer/).

### 3.2 Impacts on working-age population and labour force

Working-age population (population age 15-64) shows more pronounced projected declines than the population size in the Baseline scenario. This is because the older population in many countries is still growing because populous cohorts age, while the younger cohorts are less populous as a result of persistently low

fertility levels. The projected working-age population in the EU27 would decline to 80% of its 2020 volume by 2060 (population decline was projected at 95% of the 2020 population size).

The Baseline scenario projects a decline in working-age population in 26 countries, a significant increase in the working-age population in Sweden, Norway and Luxembourg, and a very small increase in Switzerland (Appendix Table A.2). Major destination countries of international migrants would experience only moderate decline in working-age population (reduction within -10pp, but mostly within -5pp) by 2060: Austria, Belgium, Cyprus, Denmark, Finland, France, Ireland, Malta and the UK. Most countries, 17 out of 26, would experience strong declines with reductions between -10 to -43pp between 2020 and 2060, with the most pronounced shrinkages in Bulgaria, Croatia, Latvia and Poland (Appendix Table A.2). Most of the latter are countries with low projected levels of immigration.

Although most immigrants are of working-age<sup>4</sup> (Rogers and Castro 1981, see also QuantMig Migration Estimates Explorer<sup>5</sup>), even high migration events do not profoundly change the projected trajectories and can only mildly alter the projected trends which, as shown in Table 5, vary across the countries. The impacts are of similar magnitude as for the population sizes discussed in the previous section. Only the scenarios envisaging persistence of migration after the initial migration event show some impacts, and again the impacts are differentiated depending on the region of the migration event. The patterns in terms of what regions of migration matter for what destination are also the same as for the population sizes, Persistent high-migration events from Other Europe and West Asia being impactful for the largest number of destinations.

A look at Table 5 illustrates well the variety of impactful scenarios across EU+ countries. In the UK Persistent high-migration event from South and South-East Asia and to a lesser extent from Sub-Saharan Africa or East Asia help stabilise the working-age population. To a lesser extent it also is the case for Denmark in the Persistent high-migration event from West Asia and for Ireland for the Persistent high-migration event from South and South-East Asia or Other Europe (see Appendix Table A.2). Persistent high-migration event from Other Europe nearly prevents working-age population decline in Austria. For Germany and the Netherlands, Persistent high-migration from West Asia scenario changes the projected strong decline to a moderate one.

Table 5 also clearly shows that the shrinkage in total labour force need not be as pronounced as the shrinkage in the working-age population<sup>6</sup>. The labour force does not shrink as dramatically as the working age population if we take cohort trends in labour force participation leading to higher labour force participation rate and the growing share of population with high educational attainment onto account, which both contribute to increase the participation, particularly of women. In countries with projected working-age population decline, the decline in total labour force is consistently less pronounced. In the UK, France and Denmark the simulations result in a slight decline in the working-age population in the Baseline and short migration events scenario but slight increase in projected total labour force size. Again, Persistent high-migration events from different world regions can further increase the labour force growth in respective countries and these are highlighted in Table 2. For Austria, Persistent high-migration from West Asia or Other Europe can switch the

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<sup>4</sup> Migration between the EU+ also has an impact on the projected declines in the eastern countries and less pronounced declines or projected increases in western and northern EU+ countries which receive intra-EU+ migrants. The projected declines in the member states in the east of the EU27 are pronounced although we assume a deceleration of intra-EU East-West migration through a convergence to the same emigration rate of the native-born from the eastern member states to the average of the receiving member states in the west of the EU+ (for more detail see Marois et al. 2023). However,

<sup>5</sup> Accessible at [http://quantmig.eu/data\\_and\\_estimates/estimates\\_explorer/](http://quantmig.eu/data_and_estimates/estimates_explorer/)

<sup>6</sup> Working-age population is only a potential labour force, and we allow persons between age 15 and 74 to be active in the labour force in the simulations (for the details on the modelling of the labour force and educational attainment see Marois et al. 2023).

**Table 5: Relative change in total labour force\* (LF) and in working-age population\* (WA) between 2020 and 2060 (100 = 2020) by scenarios, selected countries**

Scenario:	EU27		Sweden		Austria		Germany		Denmark		Spain		UK		France		Netherlands		Italy	
	LF	WA	LF	WA	LF	WA	LF	WA	LF	WA	LF	WA	LF	WA	LF	WA	LF	WA	LF	WA
<b>Baseline</b>	<b>86</b>	<b>80</b>	<b>128</b>	<b>128</b>	<b>98</b>	<b>93</b>	<b>89</b>	<b>87</b>	<b>102</b>	<b>95</b>	<b>69</b>	<b>67</b>	<b>103</b>	<b>98</b>	<b>102</b>	<b>95</b>	<b>94</b>	<b>88</b>	<b>85</b>	<b>75</b>
Persistent high-migration event from East Asia	86	81	129	129	99	94	90	87	102	96	70	67	104	100	103	95	94	88	85	76
Persistent high-migration event from Latin America	87	81	129	128	99	94	90	87	102	96	72	69	103	99	103	96	95	89	86	77
Persistent high-migration event from North Africa	87	81	129	128	98	93	89	87	103	96	70	68	103	99	104	97	95	89	85	76
Persistent high-migration event from Other Europe	<b>88</b>	<b>82</b>	130	130	102	<b>98</b>	<b>92</b>	<b>90</b>	103	98	70	67	103	<b>99</b>	103	95	95	89	<b>87</b>	<b>78</b>
Persistent high-migration event from South and South-East Asia	87	81	132	131	100	94	90	88	102	98	70	67	<b>105</b>	<b>101</b>	103	96	95	89	86	76
Persistent high-migration event from Sub-Saharan Africa	87	81	131	131	99	94	90	88	102	97	70	67	104	100	<b>104</b>	<b>97</b>	95	89	86	77
Persistent high-migration event from West Asia	87	<b>82</b>	<b>137</b>	<b>136</b>	<b>103</b>	<b>97</b>	<b>92</b>	<b>90</b>	<b>104</b>	<b>99</b>	69	67	103	99	103	96	<b>96</b>	<b>90</b>	85	76
Persistent migration event from East Asia	86	81	129	129	98	93	89	87	102	96	70	67	103	99	103	96	94	88	85	76
Persistent migration event from Latin America	87	81	129	128	99	94	89	87	103	97	71	68	103	98	103	95	95	89	86	76
Persistent migration event from North Africa	86	81	128	128	99	93	89	87	103	98	70	68	102	98	103	96	94	88	86	76
Persistent migration event from Other Europe	87	81	130	129	100	96	91	88	103	97	70	67	103	99	103	95	95	88	86	76
Persistent migration event from South and South-East Asia	87	81	130	129	99	93	90	88	104	99	70	67	104	100	103	95	94	88	86	76
Persistent migration event from Sub-Saharan Africa	87	81	129	128	98	94	90	87	102	97	70	67	104	100	103	96	95	89	86	76
Persistent migration event from West Asia	87	81	132	132	100	95	91	89	101	96	70	67	102	99	102	95	95	88	85	76
Short high-migration event from East Asia	86	80	129	129	98	93	89	86	101	95	70	67	103	99	102	95	94	88	85	76
Short high-migration event from Latin America	86	80	128	128	98	93	89	86	102	97	70	67	103	99	103	95	94	88	85	76
Short high-migration event from North Africa	86	80	129	128	98	93	89	86	101	96	70	67	102	98	102	95	94	88	85	76
Short high-migration event from Other Europe	86	80	129	129	99	94	89	86	102	97	69	67	103	99	102	95	94	88	85	76
Short high-migration event from South and South-East Asia	86	80	127	127	98	92	89	86	103	97	69	67	102	98	102	95	94	88	85	76
Short high-migration event from Sub-Saharan Africa	86	80	128	128	98	92	89	86	101	96	69	67	102	98	103	95	94	89	85	76
Short high-migration event from West Asia	86	80	129	129	98	93	90	86	102	97	70	67	103	99	103	95	94	88	85	76
Short migration event from East Asia	86	80	128	127	99	94	89	86	103	98	70	67	102	98	102	95	94	88	85	75
Short migration event from Latin America	86	80	129	129	100	94	89	86	102	97	69	67	102	98	102	95	94	87	85	76
Short migration event from North Africa	86	80	128	128	98	93	89	86	102	97	70	67	103	98	102	95	95	88	85	76
Short migration event from Other Europe	86	80	129	128	99	94	89	86	102	97	70	67	102	98	102	95	94	88	85	76
Short migration event from South and South-East Asia	86	80	128	128	98	94	89	86	101	96	70	67	102	98	102	95	94	88	85	75
Short migration event from Sub-Saharan Africa	86	80	129	128	98	93	89	86	101	95	69	67	102	98	103	95	94	88	85	76
Short migration event from West Asia	86	80	128	127	98	93	89	86	102	96	69	67	102	98	102	95	94	88	85	75
<b>Maximum (Max)</b>	<b>88</b>	<b>82</b>	<b>137</b>	<b>136</b>	<b>103</b>	<b>98</b>	<b>92</b>	<b>90</b>	<b>104</b>	<b>99</b>	<b>72</b>	<b>69</b>	<b>105</b>	<b>101</b>	<b>104</b>	<b>97</b>	<b>96</b>	<b>90</b>	<b>87</b>	<b>78</b>
<b>Difference between Max and the baseline in percentage points (pp)</b>	1.7	1.9	8.7	8.9	4.3	5.1	3.2	3.3	2.6	3.9	2.2	2.2	2.4	2.5	2.3	2.2	2.2	2.2	2.3	2.2

Note: **Orange**=Strong decline (<90), **Yellow**=Moderate decline (≥90 to <99), **White**=No change (≥99 to ≤101), **Green**=Moderate increase (>101 to ≤110), **Dark Green**=Strong increase (>110)

\*Persons age 15-74 can be active in the labour force; working age is defined as 15-64

Results for all countries are presented in Appendix A Table A.2 (working-age population) and Table A.3 (total labour force)

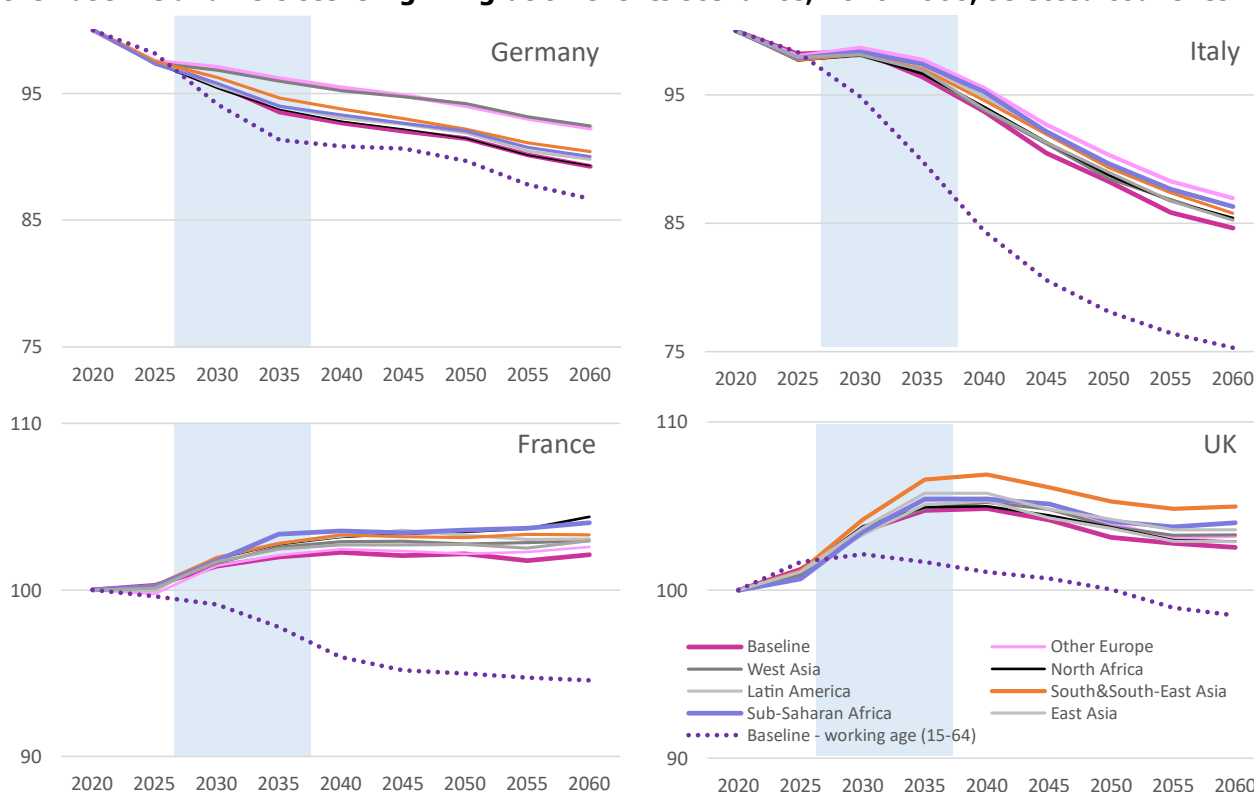


trend in labour force to a slight increase and in Germany the same two scenarios can lessen the projected declines in labour force and the working age population by about 3pp as compared to the trend projected by the Baseline scenario.

Southern European countries will experience pronounced declines in working-age populations but in case of Italy the projected labour force looks much less daunting. This does not hold for Spain where the decline in projected working-age population and total labour force is similarly pronounced and only the Persistent high-migration from Latin America somewhat lessens the labour force decline which, however, remains pronounced. Trajectories of projected change in Baseline working-age population and change in future labour force in scenarios with persistence are shown in Figure 2.

The overall impacts of the most impactful high migration events scenarios as compared to the Baseline are rather slight and cannot change the projected trajectory. Much higher migration volumes or improved labour force integration of immigrants (especially female immigrants) would be needed to more significantly boost labour force sizes (Marois et al. 2020). We do not assume improved economic integration of immigrants through increased labour force participation rates by age, sex and education but assume increasingly high-skilled migration through the cohort trend in educational expansion among immigrants from different world regions. In other words, structural change in immigrant population by educational attainment would influence the projected active population consistently across all scenarios. Further improvements in labour force integration of immigrants can further reduce the projected labour force declines or boost projected labour force growth.

**Figure 2: Projected change in working-age population in the Baseline and in total labour force in the Baseline and Persistent high-migration events scenarios, 2020-2060, selected countries**



Plots for all countries and including also plots for Short high migration events and Short migration events scenarios are available in Appendix B Figure B.2. Charts and maps depicting actual population stocks can be viewed in the interactive QuantMig Scenario Explorer at [http://www.quantmig.eu/data\\_and\\_estimates/scenarios\\_explorer/](http://www.quantmig.eu/data_and_estimates/scenarios_explorer/).

### 3.3 Age composition change and dependency ratios

Previous sections demonstrated the limited impacts of Persistent high-migration events on altering the size of the total population, the working-age population and the labour force as compared to the Baseline scenario. Decline in total and working-age population can be to some extent prevented by migration, but migration cannot change the relative share of age groups. Unsurprisingly, the long-term trends in fertility are more powerful drivers of change than the migration events at modelled magnitudes. When it comes to population ageing, high migration events show no impact even when accounting for the higher fertility of immigrants from some regions of the world. We have investigated the share of population age 65+, the share of working-age population, the age dependency ratio<sup>7</sup> and labour force dependency ratio<sup>8</sup>. The charts below depict these indicators for Sweden, a country where the Persistent high-migration events scenarios altered to the greatest extent the projected Baseline trends in population size, working-age and labour force.

**Figure 3: Projected proportion of population age 65+ in Sweden 2020-2060 in the Baseline and in Persistent high-migration events scenarios**

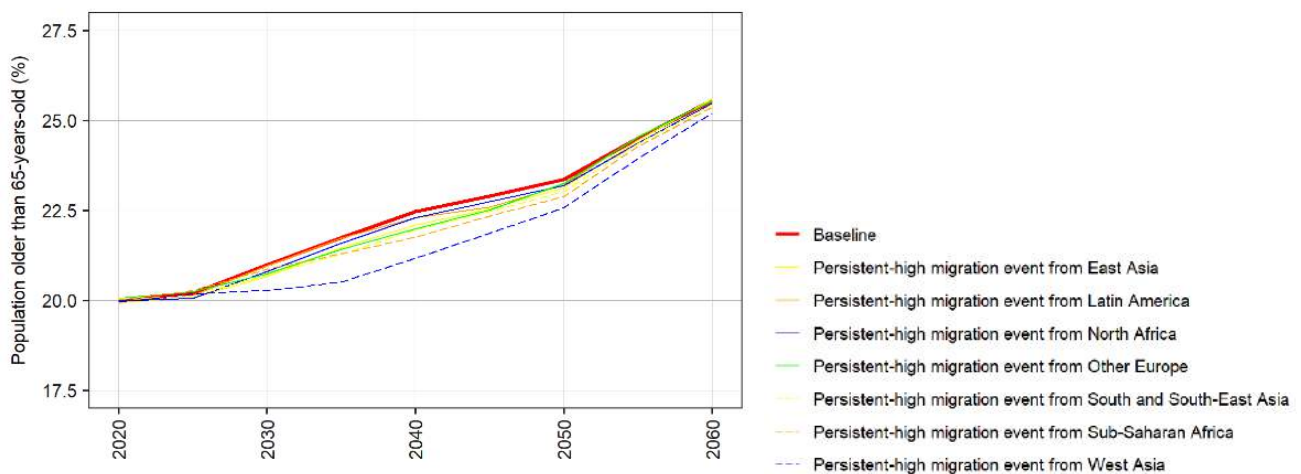


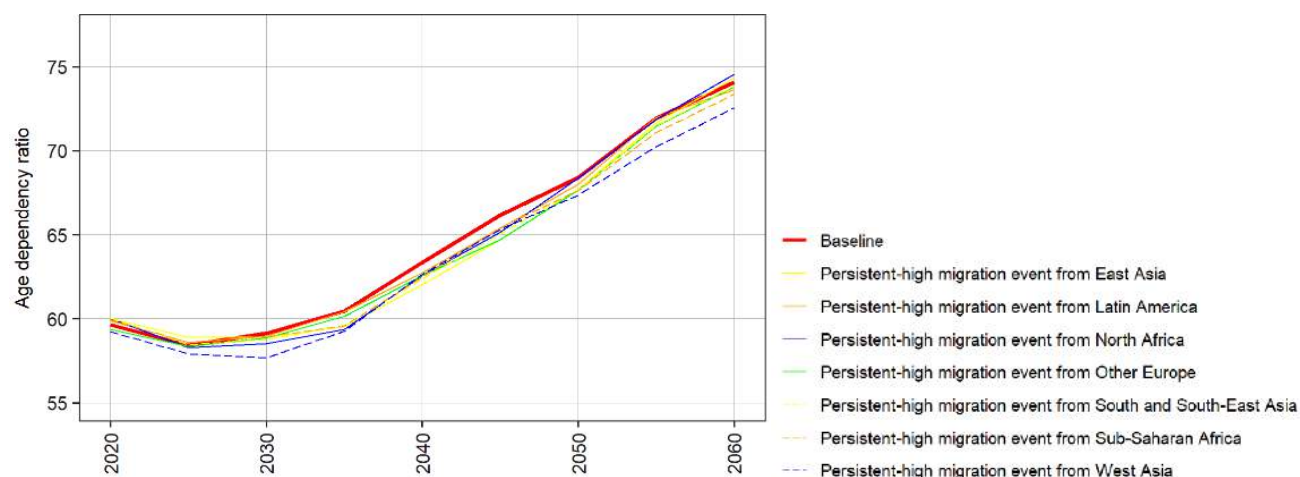
Figure 3 shows that the percentage of population age 65+ is projected to increase from 20% in 2020 to about 25% in 2060. Persistent high-migration event from West Asia slows down this increase during the 2025-2034 when the highest flows are projected, but after the event the share increases at more rapid pace to reach similar levels as other scenarios in 2060. This is because immigrants who arrived around 2025-2034 also age.

The impact on the age dependency ratio (ADR) is even less pronounced, and only small rejuvenation effect of Persistent high-migration from West Asia is visible around 2030 as a result of elevated fertility levels of newly arrived immigrants and in 2060 the impact on ADR is only -2.5pp.

<sup>7</sup> Age dependency ratio = (Population <15 + Population 65+) / Population 15-64

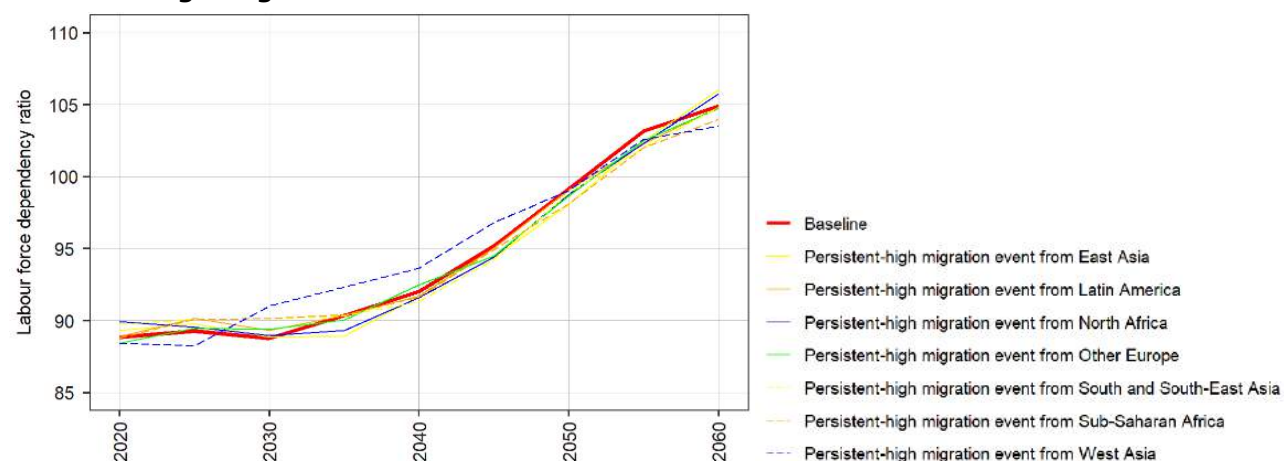
<sup>8</sup> Labour force dependency ratio (LFDR) = Inactive population / Active population; Inactive include children below age 15, person age 15 to 74 not participating the labour force, and persons age 75+; Active = Persons active at the labour force and age 15 to 74. To put it simply, LFDR is a ratio between non-workers and workers in the population.

**Figure 4: Projected age-dependency ratio in Sweden 2020-2060 in the Baseline and in Persistent high-migration events scenarios**



Note: Age dependency ratio = (Population age <15 + Population age 65+) / Population 15-64.

**Figure 5: Projected labour force dependency ratio in Sweden 2020-2060 in the Baseline and in Persistent high-migration events scenarios**



Note: Labour force dependency ratio = (Inactive (non-workers) / Active (workers)); persons can be active in the labour market between age 15 and 74. Small variation in the baseline is due to random Monte-Carlo process in the presimulation.

Impacts on labour force dependency ratio, i.e. a ratio between non-workers and workers, are mostly negligible. However, Figure 5 illustrates well that the labour force can temporarily increase. This is a combined effect of higher fertility of new immigrants in the first years after migration (Potančoková and Marois 2020) and because immigrants integrate into the labour market only gradually and men only reach the same labour force participation rates as native-born after 10-15 years since immigration while for women this gap does not close even after controlling for educational attainment (Marois and Potančoková 2020). Thus, if the high migration event from West Asia to Sweden would not be accompanied by improvements in labour market integration of immigrants (in the scenarios we envisage improvements through the cohort trends in labour market participation of women). This shows that higher volumes of migration need to be accompanied by active integration policies.

In most countries, the impact of persistent high migration event scenarios age-composition indicators related to the age composition and labor force structure is mostly negligible. In other words, migration events, even when followed by persistence in immigration, can to a limited extent alter population sizes but do not modify or rejuvenate population age composition in the long-run. Plots for age dependency ratios for all simulated countries can be viewed in the Indicators page of the QuantMig Migration Scenarios Explorer ([http://www.quantmig.eu/data\\_and\\_estimates/scenarios\\_explorer/](http://www.quantmig.eu/data_and_estimates/scenarios_explorer/)).

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## 3.4 Foreign-born population dynamics

### 3.4.1 Changes in the size and share of population born outside EU+

According to the Baseline scenario, which assumes continued region-specific emigration rates to the EU+ as in 2011-2019, the size of *population born outside the EU+* resident in all 31 EU+ countries would nearly double from the estimated 45.1 million in 2020 to 87.3 million in 2060, and their share in the EU+ total population would increase from 8.7% to 17% between the same years. The trend in the EU27 is practically identical: the share of population born outside EU+ is estimated to increase from 8.2% in 2020 to 16.7% in 2060, i.e. by 33.8 million to 69.9 million in 2060. Using the place of birth definition, we only capture first generation immigrants (G1) and the descendants of immigrants are included among the native-born population.

Naturally, the above presented averages conceal great variation in the size and the proportion of population born outside EU+ across 31 countries. Table 6 provides a glance at this diversity and allows us to assess changes over time and impacts of migration event scenarios in comparison to the Baseline. Sweden is and according to all scenarios will remain a country with the highest proportion of population born outside EU+. According to the Baseline scenario this percentage would nearly double from 14.5% in 2020 to 28.2% in 2060, corresponding to 1.5 million in 2020 and nearly 4.1 million in 2060. Persistent high migration events and Persistent migration events increase the percentage in 2060 above the share projected by the Baseline, but only Persistent high immigration event from West Asia would add more than +1pp to the share projected by the Baseline scenario. In 2060, the projected size of the population born outside the EU+ would be larger by 465 thousand and reach 4.6 million, i.e., in this scenario the share of population born outside EU+ would more than double between 2020 and 2060 (Table 6).

Germany is and will remain the country with the largest population born outside EU+ (in absolute number not a percentage of total population). The Baseline scenario estimates an increase by 9.1 million, up to 17.8 million in 2060 from the estimated 8.7 million in 2020. As a result, the share of population born outside the EU+ would double to 21.4% in 2060, ranking it second after Sweden in 2060 (rank 8 in 2020, Table 7). The share in 2060 would increase by +1pp in case of Persistent high-migration event from West Asia or from Other Europe, bringing the projected population size to 19.4 million foreign-born outside EU+ in case of Persistent high-migration event from West Asia, and to 19.2 million in case of Persistent high-migration event from Other Europe. As can be expected, Short migration events only slightly change the projected shares for 2060 and their impacts remain with 0.01pp, as shown in Table 6.

Spain has become one of the main destinations of immigrants into the EU only in the 21<sup>st</sup> century. Migration ties to Latin America play an important role, and this is clearly visible from the scenarios of migration events. Both the scenarios of Persistent high-migration event from this region (corresponding to twice-in-a-century frequency of occurrence) and Persistent migration event (corresponding to once-in-a-century frequency

of occurrence) bring the projected share of population born outside the EU+ above 19% in 2060 (as compared to 18.4 in the Baseline in 2060, up from the estimated 9.8% in 2020).

**Table 6: Projected shares of population born outside EU+ (in %) in 2020 and 2060, by scenario, selected countries**

	EU27	Sweden	UK	Austria	Germany	Spain	France	Italy	Poland
<b>Estimated % of population born outside EU+ in 2020</b>	<b>8.2%</b>	<b>14.5%</b>	<b>11.1%</b>	<b>11.1%</b>	<b>10.7%</b>	<b>9.8%</b>	<b>9.0%</b>	<b>8.2%</b>	<b>2.0%</b>
<b>Baseline, 2060</b>	<b>16.7%</b>	<b>28.2%</b>	<b>18.6%</b>	<b>19.1%</b>	<b>21.4%</b>	<b>18.4%</b>	<b>13.7%</b>	<b>20.9%</b>	<b>6.6%</b>
Persistent high-migration event from East Asia, 2060	16.8%	28.3%	18.9%	19.1%	21.6%	18.6%	13.9%	21.0%	6.6%
- from Latin America, 2060	17.1%	28.5%	18.9%	19.2%	21.7%	<b>19.7%</b>	13.9%	<b>21.4%</b>	6.7%
- from North Africa, 2060	16.9%	28.3%	18.7%	19.3%	21.6%	18.9%	14.0%	21.2%	6.6%
- from Other Europe, 2060	<b>17.3%</b>	28.9%	18.8%	<b>20.3%</b>	<b>22.4%</b>	18.8%	13.9%	21.5%	<b>7.2%</b>
- South and South-East Asia, 2060	17.0%	28.7%	<b>19.2%</b>	19.3%	21.9%	18.6%	13.9%	<b>21.4%</b>	6.7%
- from Sub-Saharan Africa, 2060	17.0%	28.9%	18.9%	19.2%	21.7%	18.7%	<b>14.1%</b>	21.3%	6.7%
- from West Asia, 2060	17.2%	<b>29.6%</b>	18.8%	19.6%	<b>22.4%</b>	18.6%	13.8%	21.0%	6.7%
Persistent migration event from East Asia, 2060	16.7%	28.3%	18.9%	19.1%	21.5%	18.3%	13.8%	20.9%	6.6%
- from Latin America, 2060	17.0%	28.3%	18.6%	19.5%	21.6%	<b>19.4%</b>	13.8%	21.2%	6.7%
- from North Africa, 2060	16.8%	28.3%	18.7%	19.1%	21.6%	18.6%	13.9%	21.1%	6.6%
- from Other Europe, 2060	17.0%	28.6%	18.8%	19.7%	22.0%	18.5%	13.8%	21.2%	6.8%
- from South and South-East Asia, 2060	16.9%	28.6%	19.0%	19.4%	21.7%	18.5%	13.8%	21.2%	6.7%
- from Sub-Saharan Africa, 2060	16.8%	28.6%	18.8%	19.2%	21.6%	18.5%	13.9%	21.1%	6.6%
- from West Asia, 2060	16.9%	28.9%	18.7%	19.5%	21.8%	18.4%	13.8%	20.9%	6.6%
Short high-migration event from East Asia, 2060	16.7%	28.2%	18.7%	19.1%	21.5%	18.4%	13.7%	20.9%	6.6%
- from Latin America, 2060	16.7%	28.2%	18.8%	19.1%	21.4%	18.6%	13.7%	20.9%	6.5%
- from North Africa, 2060	16.7%	28.3%	18.6%	19.1%	21.5%	18.4%	13.7%	20.8%	6.5%
- from Other Europe, 2060	16.7%	28.2%	18.7%	19.3%	21.6%	18.5%	13.7%	20.9%	6.6%
- South and South-East Asia, 2060	16.6%	28.3%	18.6%	18.9%	21.4%	18.4%	13.7%	20.8%	6.2%
- from Sub-Saharan Africa, 2060	16.7%	28.4%	18.6%	19.2%	21.6%	18.5%	13.7%	20.8%	6.6%
- from West Asia, 2060	16.7%	28.4%	18.7%	19.3%	21.6%	18.4%	13.7%	20.8%	6.5%
Short migration event from East Asia, 2060	16.7%	28.3%	18.6%	18.9%	21.4%	18.5%	13.6%	20.8%	6.6%
- from Latin America, 2060	16.7%	28.2%	18.7%	19.1%	21.5%	18.6%	13.6%	20.8%	6.6%
- from North Africa, 2060	16.7%	28.2%	18.7%	19.1%	21.4%	18.5%	13.7%	20.8%	6.5%
- from Other Europe, 2060	16.7%	28.1%	18.7%	19.2%	21.5%	18.4%	13.6%	20.8%	6.6%
- South and South-East Asia, 2060	16.7%	28.2%	18.7%	19.0%	21.4%	18.5%	13.7%	20.8%	6.5%
- from Sub-Saharan Africa, 2060	16.6%	28.1%	18.6%	19.0%	21.5%	18.5%	13.7%	20.8%	6.5%
- from West Asia, 2060	16.7%	28.3%	18.7%	19.1%	21.5%	18.4%	13.6%	20.8%	6.6%
<b>% increase 2020 to 2060, Baseline</b>	103	94	68	73	100	87	52	156	224
<b>% increase 2020 to maximum scenario in 2060</b>	111	104	74	83	109	101	56	163	254
<b>Difference between the max.2060 and Baseline2060 in percentage points (pp)</b>	0.6pp	1.4pp	0.6pp	1.1pp	1.0pp	1.4pp	0.4pp	0.6pp	0.6pp

Note: Results for all countries shown in Appendix Table A.4

Persistent high-migration event from Other Europe is most impactful for Austria and results in 20.3% born outside EU+ in 2060, up from the estimated 11.1% in 2020 and +1.2pp compared to the Baseline in 2060. , in the UK In UK, the population born outside the EU+ is projected to nearly double between 2020 and 2060 according to the Baseline scenario (from 7.4 million to 13.8 million) and would reach 14.5 million in

Persistent high-migration event from South & South-East Asia. The share of population born outside the EU+ from this scenario reaches 19.2% in 2060, up from the estimated 11.1% in 2020.

Much less pronounced growth of population born outside EU+ is projected for France. The projected increase in the Baseline scenario is from 9.0% in 2020 to 13.7% in 2060, up from 6.1 million in 2020 to 9.8 million in 2060. The increase would be a bit more pronounced in Persistent high-migration event from Sub-Saharan Africa which would add 467 thousand to the 2060 Baseline projection.

In contrast to France, strong growth in population born outside EU+ is projected for Italy. In 2020, the share of population born outside EU+ lower in Italy was lower than in other typical destination countries for migrants from outside EU+. However, the pace of change will be faster and by 2060 will exceed the projected share in France, the Netherlands or Belgium. This is clearly visible from Table 7, with Italy ranked with third or 4<sup>th</sup> highest proportion in 2060 depending on scenario and the projected share around 21%, up from the estimated 8.2% in 2020. Thus, in 2060 Italy may host the third largest population of persons born outside the EU+ (after Germany and the UK), counting 11.4 million according to the Baseline scenario in 2060. The simulations of Persistent high-migration event from Other Europe results in 12.0 million, and of Persistent high-migration event from West Asia in 11.9 million in 2060.

**Table 7: Top 10 countries with largest % of population born outside EU+ in 2020 and 2060 in the Baseline and in Persistent high-migration event (PHME) scenarios**

Baseline, 2020		Baseline, 2060		PHME from Other Europe, 2060		PHME from West Asia, 2060		PHME from Latin America, 2060	
Sweden	14.5%	Sweden	28.2%	Sweden	28.9%	Sweden	29.6%	Sweden	28.5%
Estonia	13.6%	Germany	21.4%	Germany	22.4%	Germany	22.4%	Germany	21.7%
Latvia	13.1%	Italy	20.9%	Italy	21.5%	Norway	21.8%	Italy	21.4%
Switzerland	12.5%	Norway	20.7%	Norway	21.4%	Italy	21.0%	Norway	21.2%
Croatia	11.5%	Switzerland	19.8%	Switzerland	20.6%	Switzerland	20.4%	Switzerland	20.4%
UK	11.1%	Austria	19.2%	Austria	20.3%	Austria	19.6%	Spain	19.7%
Austria	11.1%	UK	18.6%	Spain	18.8%	UK	18.8%	Austria	19.2%
Germany	10.7%	Spain	18.4%	UK	18.8%	Spain	18.6%	UK	18.9%
Slovenia	10.6%	Belgium	17.3%	Slovenia	17.8%	Belgium	17.7%	Portugal	17.8%
Norway	10.1%	Portugal	16.6%	Belgium	17.7%	Portugal	17.1%	Belgium	17.7%
		PHME from Sub-Saharan Africa, 2060		PHME from South & S-E Asia 2060		PHME from North Africa, 2060		PHME from East Asia, 2060	
		Sweden	28.9%	Sweden	28.7%	Sweden	28.3%	Sweden	28.3%
		Germany	21.7%	Germany	21.9%	Germany	21.6%	Germany	21.6%
		Norway	21.5%	Norway	21.5%	Italy	21.2%	Italy	21.0%
		Italy	21.3%	Italy	21.4%	Norway	20.9%	Norway	21.0%
		Switzerland	20.2%	Switzerland	20.0%	Switzerland	20.1%	Switzerland	20.1%
		Austria	19.2%	Austria	19.3%	Austria	19.3%	Austria	19.1%
		UK	18.9%	UK	19.2%	Spain	18.9%	UK	18.9%
		Spain	18.7%	Spain	18.6%	UK	18.7%	Spain	18.6%
		Belgium	17.7%	Belgium	17.7%	Belgium	17.5%	Belgium	17.4%
		Portugal	17.0%	Portugal	17.0%	Portugal	16.8%	Portugal	16.8%

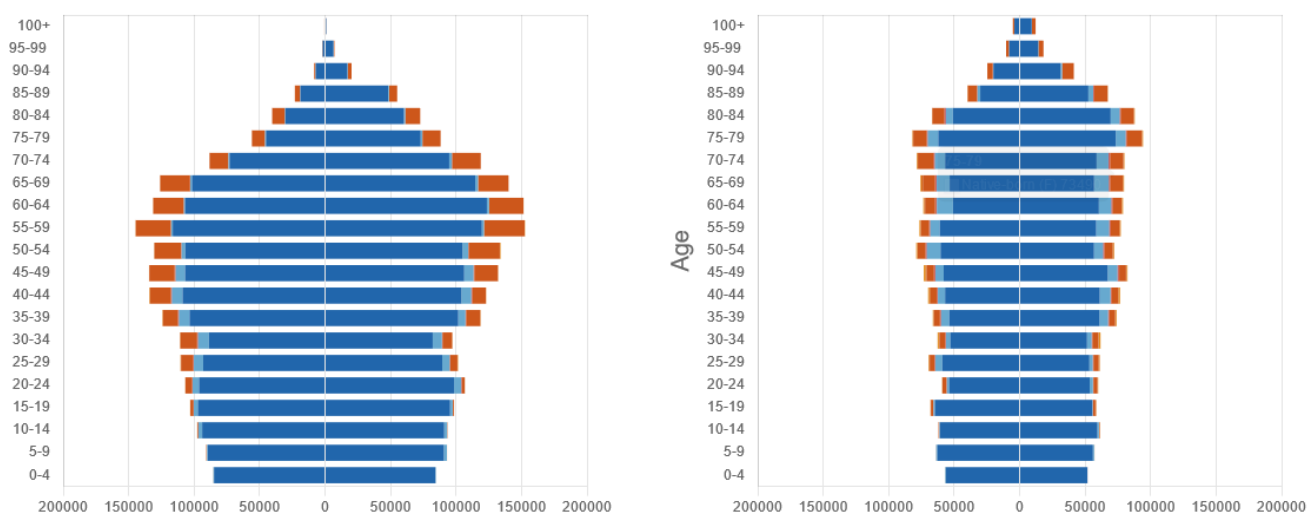
Note: Table shows ranking of countries with total population of at least 1 million in 2020

Perhaps a bit counter-intuitively, the greatest relative change in the percentage of the foreign-born from outside the EU+ of total population is not projected in the main destination countries in the west of Europe but in the countries in the east of the EU27, albeit from very low levels. The share of population born outside the EU+ is projected to nearly quadruple in Romania (from 2.3% in 2020 to 9.7% in 2060 in Baseline and

10.6% in Persistent high migration from Latin America), and more than triple in Poland (from 2.0% in 2020 to 6.6% in 2060 in Baseline and 11.6% in Persistent high migration from Other Europe, see also Table 6) and Bulgaria (from 3.1% in 2020 to 10.4% in 2060 in Baseline and 11.6% in Persistent high migration from Other Europe). These proportions around 10% are close to those seen in some of the main destination countries in 2020. According to the simulations, Slovakia will remain the country with the lowest share of population born outside EU+ in 2060 projected at 5.5% in the Baseline scenario (5.9% in Persistent high-migration event from Other Europe), up from the estimated 1.4% in 2020.

Not all EU+ countries will experience growth of the size and the share of population born outside EU+. Estonia, Latvia and Croatia are exceptions to the general trend although they ranked in 2020 among the countries with largest share of population born outside the EU+. This was due to high proportion of population born in the former USSR in case of Latvia and Estonia and in case of Croatia from former Yugoslav countries which have not yet accessed the EU. These foreign-born populations were mostly in older age groups in 2020 (see Figure 6 for Croatia)<sup>9</sup>, therefore the projected share will drop from the estimated 11.5% in 2020 to 10.6% in the Baseline scenario in 2060. Only the scenario of Persistent high immigration from Other Europe can reverse the declining trend to a growth to 13.1% in 2020 in Latvia, to 12.1% in Croatia and in case of Estonia it would stabilize the share at 13.6%. Because of the projected population decline in all three countries, the size of the population born outside the EU+ would decline in all countries and in all scenarios.

**Figure 6: Croatia's population in 2020 (left) and in 2060 (right, Baseline scenario) by age and place of birth: native-born (dark blue), born in another EU+ country (light blue) and born in Other Europe (Orange)**



Source: QuantMig Migration Scenarios Explorer

To conclude, the impacts of Persistent high migration events can increase the projected shares and sizes of population born outside the EU+, however, and speed up the growth of these population but the impacts are within a range of a few percentage points and do not change the country rankings.

<sup>9</sup> The age and place of birth compositions of the population can be explored using the Pyramids page of the QuantMig Migration Scenarios Explorer accessible at [http://quantmig.eu/data\\_and\\_estimates/scenarios\\_explorer/](http://quantmig.eu/data_and_estimates/scenarios_explorer/)

### 3.4.2 Changes in composition of the foreign-born by region of birth

The previous section demonstrated that Persistent high-migration scenarios have larger, although limited, impacts on the size and proportion of population born outside EU+ than Persistent migration events or Short migration events scenarios. This section investigates implications of Persistent high-migration events scenarios<sup>10</sup> (PHME) for the diversity of the foreign-born population (including the population born in another EU+ country than the country of residence).

The proportion of population born outside EU+ within the Foreign-born population is projected to increase between 2020 and 2060 in all countries except for Latvia, Croatia, Lithuania, Estonia and to a much lesser extent in Portugal and Greece (Table 8). As already mentioned in the previous section, this is because

**Table 8: The proportion of population born outside EU+ among the foreign-born in 2020, 2060 Baseline and in a scenario resulting in the highest proportion**

% born outside EU+ within Foreign-born					
Country	2020	Country	Baseline 2060	Country	Highest scenario in 2060
LV	80.0%	SE	81.1%	SE	82.3% PHME from Other Europe
HR	78.8%	IT	79.6%	IT	80.4% PHME from Sub-Saharan Africa
EE	77.3%	FR	79.6%	FR	80.2% PHME from Other Europe
PT	75.4%	DE	75.4%	DE	76.8% PHME from Other Europe
GR	73.9%	FI	74.9%	FI	75.6% PHME from Other Europe
FR	71.3%	ES	73.0%	ES	75.2% PHME from Other Europe
SI	68.2%	GR	71.2%	GR	74.6% PHME from West Asia
NL	67.7%	PT	70.4%	SI	72.4% PHME from West Asia
SE	67.6%	SI	68.9%	PT	72.1% PHME from Other Europe
IT	67.1%	UK	68.4%	UK	69.8% PHME from Latin America
FI	67.0%	NL	67.5%	NL	68.7% PHME from West Asia
ES	66.8%	NO	63.8%	PL	66.3% PHME from Sub-Saharan Africa
LT	66.4%	PL	63.3%	NO	65.1% PHME from Other Europe
UK	63.5%	BE	61.4%	HR	63.1% PHME from Other Europe
PL	60.2%	HR	58.9%	BE	62.3% PHME from Other Europe
DE	59.8%	DK	58.1%	LV	61.7% PHME from West Asia
BG	56.1%	LV	58.0%	BG	59.7% PHME from Other Europe
DK	55.5%	CY	56.7%	DK	59.1% PHME from Other Europe
NO	52.3%	BG	56.3%	EE	58.7% PHME from Other Europe
BE	51.2%	AT	54.9%	MT	57.9% PHME from East Asia
AT	48.5%	MT	54.7%	LT	57.3% PHME from Sub-Saharan Africa
RO	47.1%	EE	54.4%	AT	56.6% PHME from West Asia
CY	46.6%	LT	54.2%	CY	56.0% PHME from Sub-Saharan Africa
MT	43.7%	RO	52.8%	RO	54.5% PHME from Other Europe
CZ	40.8%	CZ	51.1%	CZ	54.0% PHME from Latin America
CH	40.2%	CH	49.7%	CH	51.1% PHME from Latin America
IE	33.7%	IE	43.4%	IE	44.4% PHME from West Asia
HU	28.9%	HU	36.8%	HU	38.4% PHME from Other Europe
LU	20.9%	LU	35.6%	LU	37.1% PHME from West Asia
SK	18.2%	SK	31.1%	SK	31.8% PHME from South and South-East Asia

<sup>10</sup> As can be expected, the impact of the Persistent migration event scenarios would go in the same direction but their impacts would be more limited and negligible for Short high-migration and Short migration events scenarios.



Latvia, Lithuania and Estonia have a significant proportion of foreign-born from the USSR and Croatia from other, non-EU ex-Yugoslav countries. This is visible from Table 9 which shows ranking of countries according to the proportion of non-European<sup>11</sup> among the foreign-born, where Croatia ranks last (also visible in Figure 7).

Countries with largest share of foreign population born in another EU+ country are ranked at the bottom of Table 8. These are, unsurprisingly, mostly countries located in east of the EU27, which generally host small foreign-born population in 2020, but also Switzerland, Austria and Ireland in 2020 (Turkish-born are included in Other Europe region). The number of countries where the majority of their foreign-born population is born in another EU+ country is projected to decline from 10 in 2020 to 5 in 2060 baseline and less than 5 if we consider PHME scenarios. According to Baseline scenario the share of EU+born would still be over 50% in Ireland and Switzerland but would decline to 45% in Austria. In Switzerland, the share of EU+born would drop below 50% in some of the PHME scenarios, and it would be the lowest in PHME from Latin America in 2060.

Some of the greatest increases in the proportion of population born outside the EU+ within the foreign-born are projected for Germany, Sweden and Italy. In Germany, the size of the foreign-born from another EU+ country remains very similar in all scenarios, but due to growth in populations from other world regions, the proportion declines from the estimated 40% in 2020 to 25% in the Baseline and 23% in the PHME from Other Europe scenario (Figure 7). Sweden is projected to have the highest proportion of foreign-born from outside the EU+ in 2060, followed by Italy, France Germany (Table 8), this ranking does not change if we consider Baseline scenario or scenario which results in the highest proportion of foreign-born outside EU+.

Table 8 also shows that the PHME scenarios generally diversify foreign-born populations, which is not surprising. In most countries, PHME from Other Europe or PHME from West Asia results in the highest projected proportion of foreign-born from outside the EU+ among the foreign-born population.

If we consider the share of non-European born, countries from the east of the EU27, as well as Austria and Luxemburg had less than 20% of their foreign-born from other world regions (note than Turkish-born are included in Other Europe region) in 2020. According to our scenarios, all these countries will experience diversification of their foreign-born populations and increasing proportion and the size of non-European foreign-born. Table 6 also helps identify a scenario resulting in the highest share of non-European foreign-born in each country in 2060. In most instances it is PHME from West Asia, followed by PHME from Sub-Saharan Africa. Unsurprisingly, in case of Spain and Portugal it is PHME from Latin America.

PHME scenarios increase a share of a particular non-European foreign-born group and contribute to diversification of foreign-born populations. Figure 3 shows a few examples taking a selection of countries with contrasting composition of foreign-born and projected trends. It also helps to visually assess the contributions of PHME scenarios to the growth of foreign-born population. Results for all countries and also sensitivity analysis using Persistent migration event scenarios, which results in lower volumes immigrants, are available in Appendix B Table B.3. Country-specific plots and maps for comparisons across all 31 countries are accessible at Indicators and Paps pages of the QuantMig Migration scenarios explorer ([http://www.quantmig.eu/data\\_and\\_estimates/scenarios\\_explorer/](http://www.quantmig.eu/data_and_estimates/scenarios_explorer/)).

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<sup>11</sup> Born in another EU+ country or in Other Europe region. Turkish are included as European-born.

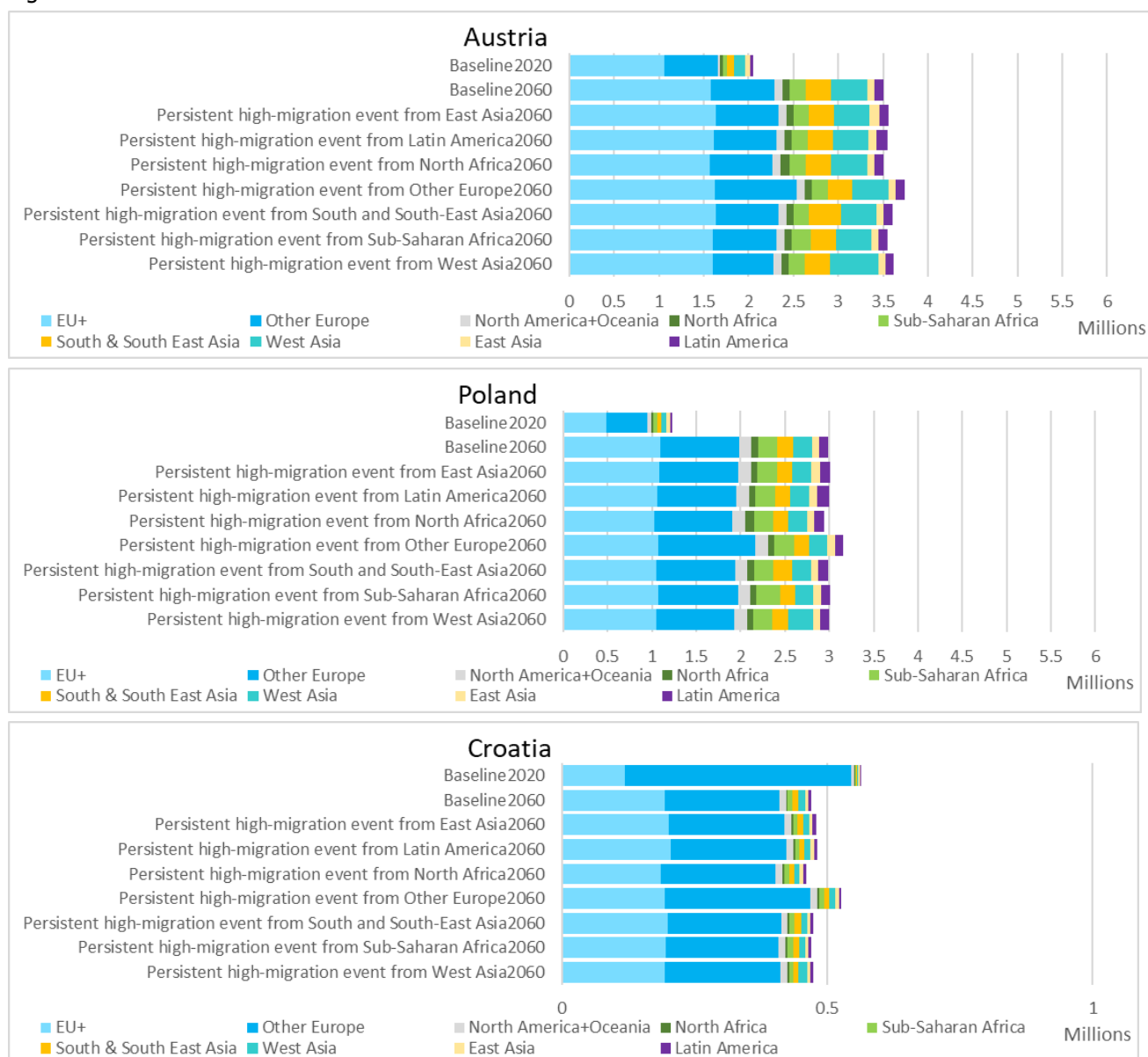
**Table 9: The proportion of population born outside Europe\* among the foreign-born in 2020, 2060 Baseline and in a scenario resulting in the highest proportion**

% born outside Europe within Foreign-born					
Country	2020	Country	Baseline 2060	Country	Highest scenario in 2060
PT	69.3%	FR	72.6%	SE	74.5% PHME from West Asia
FR	64.5%	SE	72.5%	FR	73.6% PHME from Sub-Saharan Africa
ES	63.0%	ES	68.7%	ES	71.4% PHME from Latin America
UK	59.9%	IT	66.0%	PT	67.5% PHME from Latin America
SE	56.9%	PT	65.6%	IT	67.2% PHME from South and South-East Asia
NL	54.2%	UK	64.3%	UK	65.8% PHME from South and South-East Asia
IT	49.3%	FI	58.1%	FI	59.9% PHME from West Asia
FI	43.6%	NL	57.9%	NL	59.3% PHME from West Asia
NO	43.4%	NO	55.4%	DE	57.7% PHME from West Asia
BE	43.3%	DE	55.0%	NO	57.1% PHME from Sub-Saharan Africa
DK	42.9%	BE	53.8%	BE	55.1% PHME from Sub-Saharan Africa
MT	37.7%	DK	49.5%	MT	52.6% PHME from Sub-Saharan Africa
CY	35.8%	MT	49.0%	DK	51.1% PHME from West Asia
GR	33.9%	GR	47.8%	GR	51.0% PHME from West Asia
RO	33.5%	CY	45.1%	RO	44.5% PHME from Latin America
DE	32.7%	RO	42.4%	CY	42.6% PHME from West Asia
IE	30.9%	IE	39.7%	IE	40.7% PHME from West Asia
CH	26.7%	CH	38.6%	CH	40.0% PHME from West Asia
PL	23.2%	AT	34.8%	AT	37.0% PHME from West Asia
BG	21.8%	PL	33.7%	PL	35.8% PHME from West Asia
AT	19.6%	LU	29.3%	BG	30.6% PHME from West Asia
CZ	17.8%	BG	29.0%	LU	30.1% PHME from Latin America
HU	16.1%	LT	27.7%	LT	29.3% PHME from West Asia
LU	15.1%	HU	27.5%	CZ	28.2% PHME from Sub-Saharan Africa
LT	15.1%	CZ	26.7%	HU	28.1% PHME from West Asia
LV	10.6%	LV	25.3%	LV	26.4% PHME from East Asia
EE	10.2%	EE	23.8%	EE	25.5% PHME from West Asia
SK	9.6%	SK	19.1%	SK	20.3% PHME from West Asia
SI	3.8%	HR	13.0%	HR	13.2% PHME from West Asia
HR	3.3%	SI	9.8%	SI	10.4% PHME from West Asia

Note: \* EU-born and born in Other Europe region are considered European. This includes Turkish-born.



Figure 7 continued



### 3.4.3 Shifts in the age composition

The proportion of foreign-born in the population varies across age groups. This variation reflects the past historical migration trends which formed the 2020 migrant stocks in the destination countries. We have already illustrated this for Croatia's old and ageing foreign-born population in Figure 6. In most EU+ countries, however, the situation is the opposite, and older age groups are more homogeneous and dominated by the native-born, in contrast to more diverse populations around age 30. The unprecedented migration from Syria and Ukraine is reflected in all scenarios and migration assumptions on immigration from the world regions after 2025 and differential outmigration rates modify future migration stocks by age. In the modelling we assume standard age pattern of immigration with a peak at young adulthood (see Marois et al. 2023 for more detail).

The main shifts in the presence of foreign-born are well illustrated when comparing two age groups about one generation apart – persons age 30-34 and persons age 65-69 in 2020 and in 2060 in the Baseline

scenario (Figure 8). The diversity gap is very apparent in 2020, with over 80% of native-born among persons age 60-64 in all selected countries (and Poland and many other eastern European countries reaching 99%). The share of native-born ranges from 66% in the UK to 95% in Poland among 30-34 year-olds in 2020. Thus, in 2020 many European countries still have more homogenous older population, with high share of native-born and European-born and already much more diversified populations at younger ages.

In the UK, 87% were native-born 3% born in another EU+ country and 9.5% were born in non-European region among the 60-64 year-olds in 2020, as compared to 66% native-born, 13% born in another EU+ country and 20% born in a non-European region among 30-34 years old in 2020. In Spain is the intergenerational diversity gaps even more pronounced (88% native born and only 7% born in a non-European region at age 60-64 as compared to 76% native-born and 17% born in non-European region at age 30-34 in 2020), and the foreign-born population is predominantly of Latin American origin, i.e. more homogeneous than in case of UK or Germany (Figure 8).

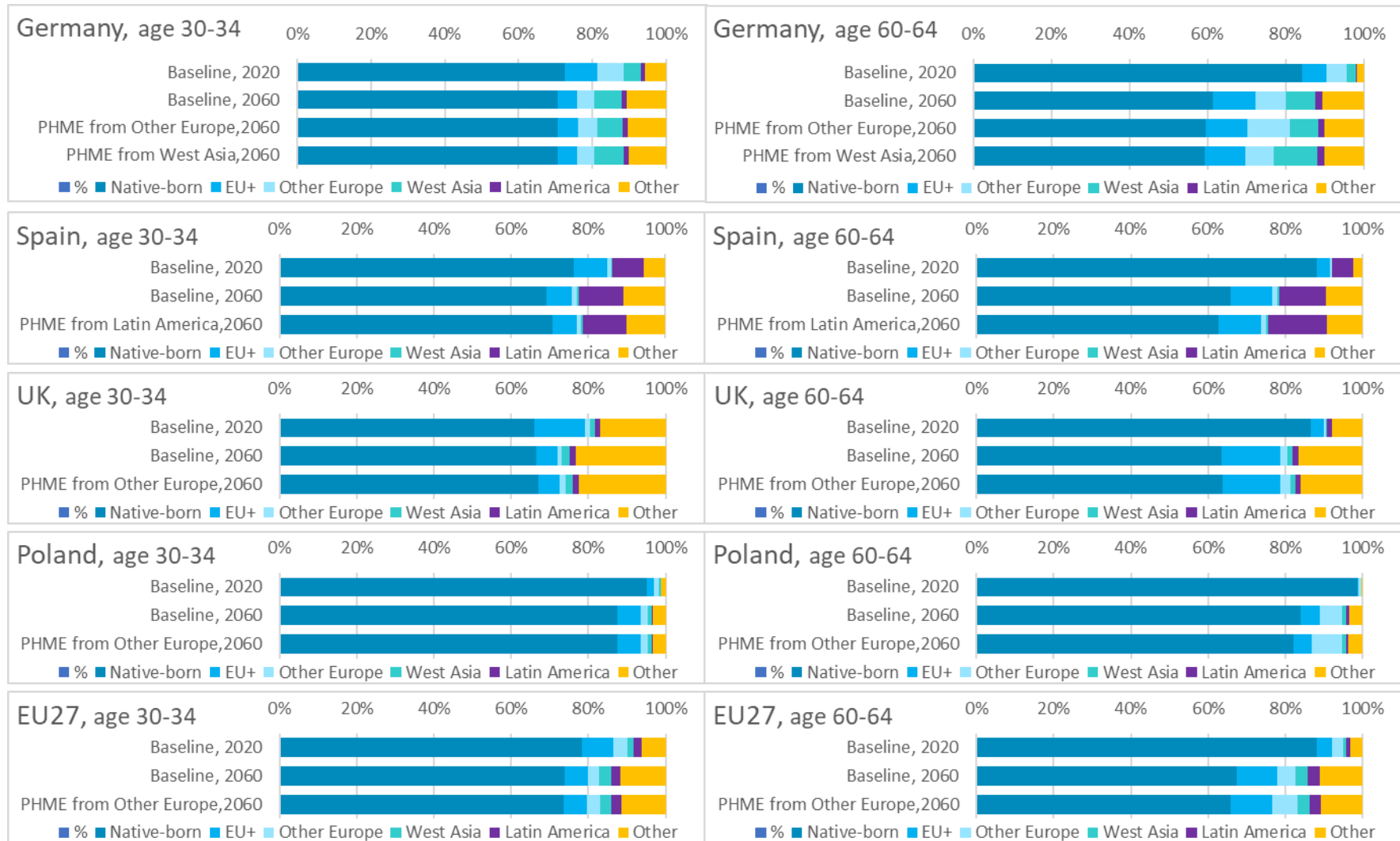
Population at age 20-24 in 2020 will be 60-64 years old in 2060 and if immigration trends continue as in the past and if our assumptions on emigration (which indirectly reflect return migration and onward migration of foreigners to other EU+ countries) we will see this generational gap closing. Figure 8 shows that the share of native-born may in fact be higher among 60-64 year-olds than among 30-34 year-olds in 2060 according to the Baseline scenario. In addition, the proportion of persons born outside EU+ and non-European will be higher in both age groups in 2060 as compared to 2020.

Charts in Figure 8 plot ethnic compositions in the Baseline and the Persistent high-migration scenario with highest influx in each of the selected countries. The plots illustrate well that what matters for future change is the Baseline trajectory and that persistent high-migration event scenarios only slightly modify the proportions of persons born outside EU+ among the 60-64 year-olds (who were at ages of peak immigration during the high-migration event). For example, in Germany the Persistent high-migration event from West Asia increases the proportion of population 60-64 and born in West Asia by +3pp, and Persistent high-migration event from Other Europe inflates the proportion of population from Other Europe region among 60-64 year olds also by +3pp (Figure 8). Similarly in Spain, the Persistent high-migration event from Latin America results in 15% Latin-American born among the 60-64 years olds in 2060 as compared to projected 12% in the Baseline scenario.

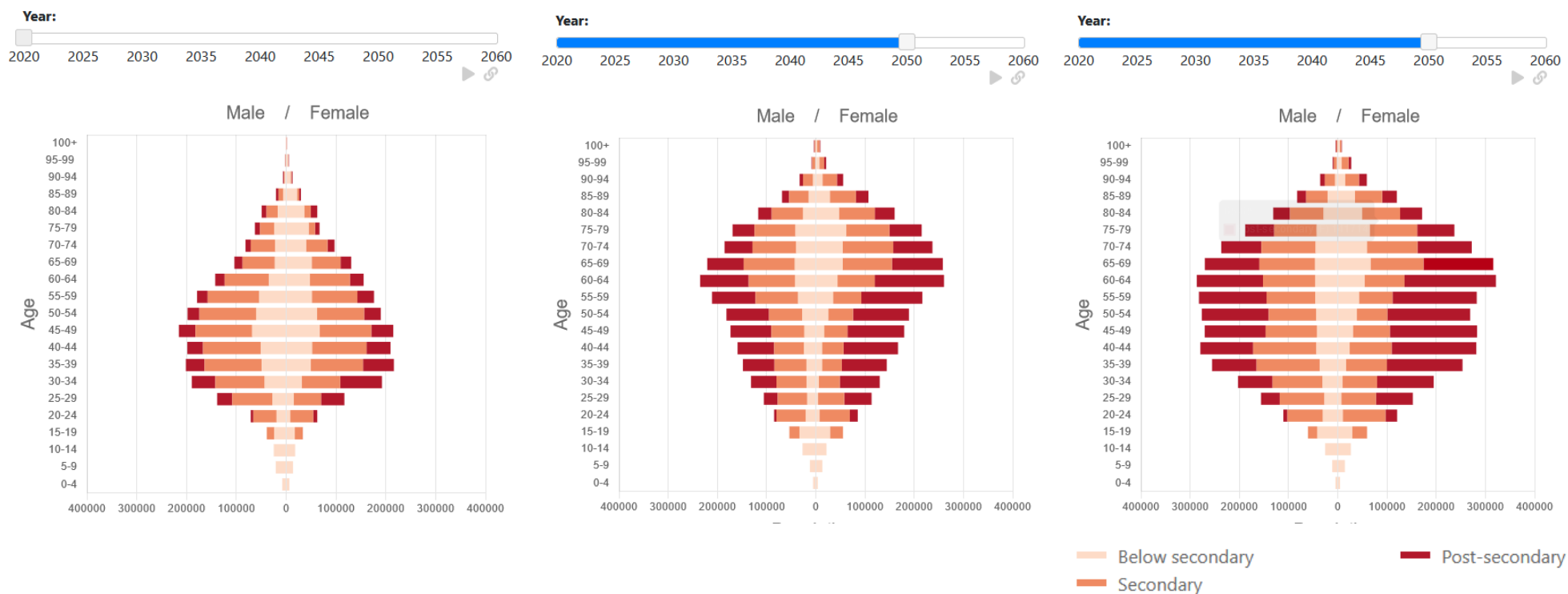
Population ageing is a not a trend restricted to native-born - immigrant populations will also be ageing. This is illustrated for immigrants from Other Europe in Germany in Figure 9. In 2020 the population of persons born in Other Europe (includes Turkish-born and persons born in ex-Yugoslav countries outside the EU27) is smaller and younger, with largest population between age 35 – 49. In 2050 the largest age groups would be at age 60-69 according to the Baseline scenario. Persistent high-migration event from Other Europe results in older population than in 2020 but with a larger share at age 35-59. Figure 9 also illustrates the projected educational expansion among the immigrants from Other Europe region. The share of foreign-brn is very small among children, because most immigrants and children born to immigrants in the destination country are in the native-born category. Unfortunately, EU-LFS data are insufficient to estimate and model second generation (G2).

Similar pyramids as the one in Figure 9 can be generated in the Pyramids page of the QuantMig Migration scenarios Explorer ([http://www.quantmig.eu/data\\_and\\_estimates/scenarios\\_explorer/](http://www.quantmig.eu/data_and_estimates/scenarios_explorer/)).

**Figure 8: Change in diversity of population age 30-34 and 60-64 by place of birth between 2020 and 2060 according to the Baseline scenario and selected Persistent high-migration event scenario**



**Figure 9: Projected population born in Other Europe\* region resident in Germany in 2020 and in 2020, Baseline and in the Persistent high-migration event from Other Europe scenario**



Note: \* Turkish-born are included in among persons born in Other Europe region.

Source: QuantMig Migration Scenarios Explorer ([http://quantmig.eu/data\\_and\\_estimates/scenarios\\_explorer/](http://quantmig.eu/data_and_estimates/scenarios_explorer/))

## 4. Summary and conclusions

For longer horizons, migration cannot be reasonably accurately predicted (Barker and Bijak 2021), but long-term outlook is needed, given the strong and long-lasting momentum of demographic processes. We have tested the impact of several sets of high-migration events potentially occurring during 2025–29, either as an one off shocks lasting one calendar year, or an initial shock followed by persistently persistence in immigration of person from a given region for a decade, albeit of gradually declining volume in each subsequent year higher immigration for a decade following the initial shock. These events were implemented independently for flows from seven different world regions – Other Europe, North Africa, Sub-Saharan Africa, Latin America, West Asia, South & South-East Asia, and East Asia —, thus resulting in 28 scenarios (14 with once-in-a-decade, and 14 with twice-in-a-century events, both short and persistent). All scenarios are modelled as additional immigration flows beyond the Baseline scenario, in which immigration from each world region into EU+ continues with the same intensity as in 2011–19. Contrasting different scenarios allows us to understand the differentiated impacts of various inflows on destination countries' working-age population and labour force.

As one might expect, the short impact for a duration of a single calendar year does not leave any lasting imprint on future population sizes and structures. Once-in-a-decade events do not generate sufficiently large flows to leave any sizeable imprint on destination populations. High-migration events that persist over time – for example, through family reunifications, migration networks or newly established migration opportunities – can increase the working-age population and labour force sizes in countries with existing diaspora, but mainly when these events arise in the regions of the world with established migration links to the destination country (e.g. Other Europe or West Asia for migration to Germany, or South and South-East Asia for the UK, see Figure 2). In absolute terms, even such impacts are relatively small: would only raise the labour force by a few percentage points.

Although high-migration events are challenging for integration policies, they are not a major long-term game-changer because of the demographic momentum driving major trends. The scenarios of high-migration events presented above confirm that even large immigration events cannot substantially boost the projected labour force size at the national or EU levels. Short (one-off) high-migration events of a magnitude similar to that of the 2015 in Europe leave hardly any trace on projected labour force sizes in the long-run. Only persistent immigration can boost the projected labour force to an extent, but the effects on labour force dependency ratios (the ratio of non-workers to workers) are negligible. Confirming earlier findings, the proclaimed positive demographic consequences of immigration would necessitate large and sustained immigration in the long term to slow down population ageing and stabilise labour force dependency ratios in European countries, and these immigration flows would need to be significantly higher than can be reasonably envisaged (Bijak et al. 2008).

What our results show, however, is that although population ageing is inevitable the decline in labour force is not. Most, but not all, EU+ countries will face working-age population decline, but the labour force would decline at a lesser pace or may not decline at all once we consider the continuing education expansion and trends in labour force participation. High immigration would have to be sustained at much higher volumes than those projected in our scenarios (and much higher than it is realistic to assume) to leave a more pronounced impact on the labour force size and the dependency ratios; and that would occur only if it were coupled with better labour force integration of immigrants or selective immigration of those with high human capital (Marois et al. 2019a and 2019b).

It is important to recognize the limitations of the view that immigration could be a tool to address Europe's demographic challenges, especially if it is not paired with inclusive labour market policies (Lutz et al. 2019, pp. 37-44). Our results show that immigration cannot prevent or slow down the future labour force



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decline in many countries and confirm that we can realistically expect only moderate impacts. QuantMig simulations do not modify the integration trajectories of immigrants but rely on evidence from past data. In that sense, the past experience of former immigrants from each world region is translated into what we foresee for the future. Other studies have demonstrated that the educational background of immigrants and their integration into the labor force have a more significant impact on the labor force size and labor force dependency ratio than the absolute number of immigrants received. An example of this research comes from the CEPAM project, where Marois et al. (2020) showed that doubling migration in the EU could result in either a substantial improvement of the labor force dependency ratio if the incoming migrants are highly educated and well-integrated into the workforce or a negative impact if their socioeconomic situation worsens. These results, in combination with our previous work, speak for a stronger focus on inclusive migration and integration policies.

It's worth noting that while assuming a rise in the educational attainment of immigrants based on ongoing trends, the scenarios presented in this report do not account for any changes in the integration of these individuals into the labor force based on their education and region of birth. Consequently, our findings, which indicate that high-migration events would have minimal effects on the demographic and labor force composition of EU+ countries, are valid only under the assumption that there will be no major shifts in labor force behaviors among immigrants. The simulations presented above do not modify the labour force integration trajectories of immigrants, and rely on evidence from the past labour force participation rates. In this sense, the past experience of former immigrants is translated into what we expect for future immigrants from each world region. These results, in combination with our previous work where we considered improved (or worsened) economic integration of immigrants speak for stronger focus on inclusive migration and integration policies (see also Lutz et al. 2019, Marois et al. 2019, Marois and Potančoková 2020).

Despite of the progress in harmonisation and modelling of origin-destination migration flows, data on differences in migration rates and patterns of native-born and foreign-born groups and their return migration are lacking. In addition, the available data are of limited value for macro-level comparative studies. This impedes more nuanced modelling of diversity of European populations, and points out to the priority areas for future data collection and harmonisation. For example, immigration data are not published by country of previous residence and country of birth, making it hard to estimate the rates of onward mobility of foreign-born. Emigration data by duration of residence are largely unavailable and data for estimation of emigration rates by place of birth and country of destination are only available from handful European statistical offices and are not harmonised in terms of definition of immigrants. Migration data by place of birth, duration of stay and destination would help reduce the uncertainty in the estimates of EU+ born and nationals in QuantMig-Mic model. With the current data we probably underestimate the return migration of native-born and possibly over-estimate the size and proportion of population born in another EU+ country (because, for example, Polish-born returning from the UK to Poland would be among the EU+born on the flow from the UK to Poland). Emigration data by duration of stay would improve the life-course modelling in the microsimulation model and would potentially return more realistic migration stocks by age than the model age patterns we use in the current model.

Last but not least, more refined analysis of population diversity would benefit from incorporation of the second generation, i.e. the descendants of immigrants into the model and estimates. This was not possible due to limitations of the EU-LFS data, therefore, our estimates only pertain to the first generation immigrants.

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## Appendix A

Tables present relative change between 2020 and 2060 for all 31 simulated countries. We include these results in the appendix to the report because indicators indexed on 2020 are not included in the QuantMig Migration Scenarios Explorer.

Table A.1 Relative change in total population between 2020 and 2060 (2020 = 100), all countries and all scenarios

Table A.2 Relative change in working-age population (age 15-64) between 2020 and 2060 (2020 = 100), all countries and all scenarios

Table A.3 Relative change in total labour force\* between 2020 and 2060 (2020 = 100), all countries and all scenarios

Table A.4 Projected proportions of the population born outside EU+ in 2020 and 2060, all scenarios, all countries

### Legend to table A.1, A.2 and A4.3:

**Orange** = Strong decline (below -10pp)

**Yellow** = Moderate decline (-1 to -10pp)

**White** = No change (within +1 to -1pp)

**Green** = Moderate increase (+1 to +10pp)

**Dark Green** = Strong increase (more than +10pp)

Table A.1: Relative change in total population between 2020 and 2060 (2020 = 100), all countries and all scenarios

Scenario:	EU+	EU27	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czechia	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Iceland	Ireland
<b>Baseline</b>	<b>98</b>	<b>95</b>	<b>111</b>	<b>110</b>	<b>67</b>	<b>68</b>	<b>114</b>	<b>91</b>	<b>107</b>	<b>93</b>	<b>100</b>	<b>106</b>	<b>102</b>	<b>85</b>	<b>76</b>	<b>152</b>	<b>111</b>
Persistent high-migration event from East Asia	99	96	113	110	67	69	114	91	108	91	100	107	103	84	76	144	112
- from Latin America	99	96	112	111	67	69	115	91	108	89	101	107	103	85	76	146	112
- from North Africa	99	96	112	111	67	68	115	92	108	93	100	108	103	84	76	150	112
- from Other Europe	100	97	117	112	69	71	119	92	109	94	103	107	105	85	77	150	113
- from South and South-East Asia	99	96	113	111	67	68	114	92	109	91	101	107	103	85	76	148	113
- from Sub-Saharan Africa	99	97	113	112	67	68	118	91	109	91	102	108	103	85	75	142	113
- from West Asia	100	97	115	112	68	68	115	92	111	92	103	107	106	85	76	151	111
Persistent migration event from East Asia	99	96	111	110	67	67	111	92	108	93	99	107	102	84	76	150	112
- from Latin America	99	96	112	110	67	68	117	91	109	94	100	107	103	84	76	147	113
- from North Africa	99	96	112	110	67	69	112	91	109	93	100	107	103	84	76	147	112
- from Other Europe	99	96	114	111	67	70	118	92	108	94	102	107	104	85	76	150	112
- from South and South-East Asia	99	96	113	110	67	67	117	91	109	94	101	107	103	84	76	150	113
- from Sub-Saharan Africa	99	96	113	111	67	68	114	91	109	92	101	107	103	85	76	150	112
- from West Asia	99	96	113	111	67	68	112	91	108	92	101	107	104	84	76	148	111
Short high-migration event from East Asia	98	95	112	110	67	68	114	91	107	92	102	107	102	84	77	149	111
- from Latin America	98	96	112	110	66	67	113	91	108	94	99	107	102	84	76	149	110
- from North Africa	98	96	112	110	67	69	116	91	107	91	101	107	102	84	76	151	113
- from Other Europe	98	96	112	110	67	69	117	92	108	91	101	106	103	84	76	144	112
- from South and South-East Asia	98	95	111	110	67	67	114	90	108	90	101	106	102	84	76	145	110
- from Sub-Saharan Africa	98	96	111	111	66	67	114	91	107	92	101	107	102	84	75	146	112
- from West Asia	98	96	112	110	67	68	115	91	109	94	100	106	103	84	76	148	111
Short migration event from East Asia	98	96	113	109	67	68	114	92	109	95	101	107	102	85	76	149	112
- from Latin America	98	95	112	110	67	68	114	91	108	92	101	106	102	84	75	145	110
- from North Africa	98	96	112	110	67	68	113	91	108	91	100	106	102	85	76	144	111
- from Other Europe	98	96	112	110	67	69	112	91	108	93	100	106	103	84	77	145	111
- from South and South-East Asia	98	96	112	109	68	67	117	92	108	92	100	106	102	84	76	145	112
- from Sub-Saharan Africa	98	96	111	110	67	69	114	92	107	92	101	107	102	84	77	149	111
- from West Asia	98	95	112	110	66	68	114	91	108	91	100	107	102	84	76	144	111
<b>Max</b>	<b>100</b>	<b>97</b>	<b>117</b>	<b>112</b>	<b>69</b>	<b>71</b>	<b>119</b>	<b>92</b>	<b>111</b>	<b>95</b>	<b>103</b>	<b>108</b>	<b>106</b>	<b>85</b>	<b>77</b>	<b>151</b>	<b>113</b>
Difference in percentage points	1.6	1.8	5.3	2.0	1.7	2.7	5.1	1.0	3.1	2.2	2.5	2.0	3.8	0.7	0.6	-1.3	1.5

Table A.1 continued

Scenario:	Italy	Latvia	Lithuania	Luxemb.	Malta	Netherlands	Norway	Poland	Portugal	Romania	Slovakia	Slovenia	Spain	Sweden	Switzerland	UK
<b>Baseline</b>	<b>92</b>	<b>72</b>	<b>72</b>	<b>152</b>	<b>112</b>	<b>102</b>	<b>133</b>	<b>79</b>	<b>86</b>	<b>72</b>	<b>91</b>	<b>90</b>	<b>89</b>	<b>139</b>	<b>121</b>	<b>111</b>
Persistent high-migration event from East Asia	92	74	72	147	110	102	131	79	87	71	93	90	90	140	121	112
- from Latin America	93	72	72	155	113	103	133	79	<b>89</b>	72	92	88	<b>92</b>	139	122	111
- from North Africa	93	72	72	159	110	103	134	79	87	72	92	88	91	140	121	111
- from Other Europe	<b>94</b>	<b>76</b>	<b>75</b>	158	117	<b>104</b>	135	<b>80</b>	88	72	<b>95</b>	<b>96</b>	90	141	<b>123</b>	111
- South and South-East Asia	93	74	73	157	111	103	<b>136</b>	79	87	72	93	90	90	142	<b>123</b>	<b>113</b>
- from Sub-Saharan Africa	<b>94</b>	74	74	155	112	103	135	79	87	72	92	88	90	142	122	112
- from West Asia	92	75	73	155	116	<b>104</b>	135	79	87	<b>73</b>	92	90	<b>90</b>	<b>148</b>	122	112
Persistent migration event from East Asia	92	74	72	148	112	103	129	78	87	72	92	88	90	140	121	112
- from Latin America	93	71	72	159	111	103	133	79	88	72	94	88	91	140	122	111
- from North Africa	93	74	72	151	111	102	133	79	86	71	92	90	90	140	121	111
- from Other Europe	92	75	73	156	111	103	133	79	86	71	92	92	<b>90</b>	140	121	111
- from South and South-East Asia	93	73	73	155	112	102	134	79	87	71	92	89	<b>90</b>	141	121	112
- from Sub-Saharan Africa	93	73	71	155	114	103	135	79	87	72	91	88	<b>90</b>	140	121	112
- from West Asia	92	74	72	158	115	103	133	79	86	72	92	89	<b>90</b>	143	121	111
Short high-migration event from East Asia	92	72	71	150	112	102	133	79	86	71	92	89	<b>90</b>	140	121	111
- from Latin America	92	72	71	156	111	102	134	79	87	71	92	89	<b>90</b>	140	121	111
- from North Africa	92	73	73	157	115	102	133	79	87	71	92	88	<b>90</b>	139	120	111
- from Other Europe	92	73	71	156	113	102	134	79	86	72	93	90	<b>90</b>	140	121	111
- from South and South-East Asia	92	71	71	157	109	102	132	78	86	71	91	88	<b>89</b>	139	121	111
- from Sub-Saharan Africa	92	71	72	157	110	103	133	79	86	72	92	89	<b>90</b>	139	120	111
- from West Asia	92	72	71	154	111	102	133	79	86	71	92	89	<b>90</b>	140	121	111
Short migration event from East Asia	92	73	72	155	111	102	133	79	86	71	91	89	<b>90</b>	139	120	111
- from Latin America	92	72	72	151	111	102	131	79	86	71	92	88	<b>90</b>	140	121	111
- from North Africa	92	72	72	154	114	102	132	79	86	71	91	89	<b>90</b>	139	120	111
- from Other Europe	92	72	72	153	114	102	133	79	86	71	92	87	<b>90</b>	140	121	111
- from South and South-East Asia	92	73	72	155	109	103	132	79	86	71	92	90	<b>90</b>	140	121	111
- from Sub-Saharan Africa	92	73	71	151	110	102	132	79	87	72	92	88	<b>90</b>	140	121	111
- from West Asia	92	72	72	153	111	102	133	79	86	71	94	89	<b>89</b>	139	121	111
<b>Max</b>	<b>94</b>	<b>76</b>	<b>75</b>	<b>159</b>	<b>117</b>	<b>104</b>	<b>136</b>	<b>80</b>	<b>89</b>	<b>73</b>	<b>95</b>	<b>96</b>	<b>92</b>	<b>148</b>	<b>123</b>	<b>113</b>
Difference in percentage points	1.9	3.4	3.0	6.9	4.7	1.8	3.0	1.0	3.2	1.3	3.6	6.2	2.9	8.7	2.0	2.2

Table A.2: Relative change in working-age population (age 15-64) between 2020 and 2060 (2020 = 100), all countries and all scenarios

Scenario:	EU+	EU27	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czechia	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Iceland	Ireland	Italy
<b>Baseline</b>	<b>83</b>	<b>80</b>	<b>93</b>	<b>96</b>	<b>57</b>	<b>57</b>	<b>94</b>	<b>76</b>	<b>95</b>	<b>84</b>	<b>90</b>	<b>95</b>	<b>87</b>	<b>69</b>	<b>65</b>	<b>136</b>	<b>97</b>	<b>75</b>
Persistent high-migration event from East Asia	84	81	94	96	58	57	90	76	96	81	89	95	87	68	65	132	97	76
- from Latin America	84	81	94	96	58	59	92	76	96	79	90	96	87	69	65	127	98	77
- from North Africa	84	81	93	97	58	57	95	76	96	82	90	97	87	69	66	133	97	76
- from Other Europe	<b>85</b>	<b>82</b>	<b>98</b>	<b>99</b>	<b>60</b>	<b>61</b>	<b>97</b>	77	98	<b>84</b>	<b>92</b>	95	90	<b>70</b>	<b>66</b>	<b>139</b>	99	<b>78</b>
- South and South-East Asia	<b>85</b>	81	94	97	57	57	93	77	98	80	91	96	88	<b>70</b>	65	132	<b>100</b>	76
- from Sub-Saharan Africa	<b>85</b>	81	94	98	58	59	<b>97</b>	76	97	80	91	<b>97</b>	88	69	64	130	99	77
- from West Asia	<b>85</b>	<b>82</b>	97	98	59	58	94	77	<b>99</b>	81	<b>92</b>	96	<b>90</b>	<b>70</b>	65	137	97	76
Persistent migration event from East Asia	84	81	93	96	57	57	91	77	96	82	89	96	87	68	65	133	98	76
- from Latin America	84	81	94	96	58	57	94	76	97	84	90	95	87	69	65	134	99	76
- from North Africa	84	81	93	97	57	58	92	76	98	83	89	96	87	69	65	136	98	76
- from Other Europe	84	81	96	96	58	59	96	76	97	82	91	95	88	<b>70</b>	66	136	98	76
- from South and South-East Asia	84	81	93	96	58	56	94	76	99	82	90	95	88	68	65	132	98	76
- from Sub-Saharan Africa	84	81	94	97	57	57	93	76	97	82	90	96	87	69	65	136	97	76
- from West Asia	84	81	95	97	57	58	90	76	96	82	90	95	89	69	<b>66</b>	127	98	76
Short high-migration event from East Asia	83	80	93	96	58	58	93	76	95	81	91	95	86	69	65	134	97	76
- from Latin America	83	80	93	95	57	57	92	76	97	82	89	95	87	68	65	132	97	76
- from North Africa	83	80	93	96	58	58	94	76	96	80	90	95	87	68	65	137	98	76
- from Other Europe	84	80	94	96	57	58	94	77	97	79	91	95	87	69	64	130	97	76
- from South and South-East Asia	83	80	92	96	56	57	91	75	97	80	90	95	86	69	65	133	96	76
- from Sub-Saharan Africa	83	80	92	97	57	57	93	76	96	82	90	95	87	68	65	130	99	76
- from West Asia	84	80	93	97	57	57	92	76	97	82	89	95	87	69	65	134	97	76
Short migration event from East Asia	83	80	94	96	57	57	93	76	98	84	90	95	87	69	66	136	97	75
- from Latin America	83	80	94	95	58	57	92	76	97	81	90	95	87	68	64	129	96	76
- from North Africa	83	80	93	96	58	58	92	76	97	81	89	95	87	70	66	128	97	76
- from Other Europe	83	80	94	96	57	58	91	76	97	82	89	95	87	69	65	127	97	76
- from South and South-East Asia	83	80	94	96	58	57	95	77	96	81	89	95	87	68	65	133	98	75
- from Sub-Saharan Africa	83	80	93	96	57	58	93	76	95	81	90	95	87	68	65	137	98	76
- from West Asia	83	80	93	96	56	58	92	76	96	80	90	95	87	68	65	130	97	75
<b>Max</b>	<b>85</b>	<b>82</b>	<b>98</b>	<b>99</b>	<b>60</b>	<b>61</b>	<b>97</b>	<b>77</b>	<b>99</b>	<b>84</b>	<b>92</b>	<b>97</b>	<b>90</b>	<b>70</b>	<b>66</b>	<b>139</b>	<b>100</b>	<b>78</b>
Difference in percentage points	1.7	1.9	5.0	2.4	2.4	3.4	3.6	1.6	3.9	0.6	2.0	2.2	3.8	1.0	1.0	3.0	2.8	2.2

Table A.2 continued

Scenario:	Latvia	Lithuania	Luxemb.	Malta	Netherlands	Norway	Poland	Portugal	Romania	Slovakia	Slovenia	Spain	Sweden	Switzerl.	UK
<b>Baseline</b>	<b>61</b>	<b>63</b>	<b>128</b>	<b>95</b>	<b>88</b>	<b>118</b>	<b>62</b>	<b>71</b>	<b>64</b>	<b>73</b>	<b>72</b>	<b>67</b>	<b>128</b>	<b>101</b>	<b>98</b>
Persistent high-migration event from East	62	62	124	93	88	114	62	71	64	75	72	67	129	102	100
- from Latin America	61	62	132	97	89	117	62	<b>73</b>	65	75	70	<b>69</b>	128	103	99
- from North Africa	62	63	134	95	89	117	62	72	64	75	71	68	128	102	99
- from Other Europe	<b>64</b>	<b>66</b>	<b>138</b>	<b>99</b>	89	119	<b>63</b>	72	<b>65</b>	<b>77</b>	<b>77</b>	67	130	<b>104</b>	99
- South and South-East Asia	63	64	134	93	89	<b>120</b>	62	71	64	76	72	67	131	<b>104</b>	<b>101</b>
- from Sub-Saharan Africa	<b>64</b>	65	131	96	89	119	62	72	64	74	71	67	131	102	100
- from West Asia	63	63	130	97	<b>90</b>	<b>120</b>	<b>63</b>	71	<b>65</b>	75	72	67	<b>136</b>	103	99
Persistent migration event from East Asia	62	62	125	92	88	113	62	71	64	75	72	67	129	102	99
- from Latin America	59	62	135	94	89	117	62	73	64	75	71	68	128	103	98
- from North Africa	64	62	129	94	88	117	62	71	63	75	72	68	128	102	98
- from Other Europe	63	63	134	94	88	118	62	71	64	74	74	67	129	103	99
- from South and South-East Asia	61	63	132	95	88	118	62	71	64	75	72	67	129	102	100
- from Sub-Saharan Africa	62	62	136	99	89	119	62	71	64	73	70	67	128	102	100
- from West Asia	62	62	137	98	88	118	62	70	63	74	72	67	132	103	99
Short high-migration event from East Asia	62	60	126	98	88	116	62	71	64	75	71	67	129	102	99
- from Latin America	61	62	131	91	88	117	62	71	63	75	72	67	128	102	99
- from North Africa	61	63	135	98	88	117	62	72	63	74	69	67	128	101	98
- from Other Europe	60	62	135	98	88	118	62	71	64	76	72	67	129	102	99
- from South and South-East Asia	60	61	131	90	88	116	61	71	63	73	71	67	127	103	98
- from Sub-Saharan Africa	59	63	134	93	89	117	62	71	64	74	71	67	128	101	98
- from West Asia	61	61	131	95	88	116	62	71	63	75	71	67	129	102	99
Short migration event from East Asia	61	62	133	94	88	118	62	71	63	75	72	67	127	100	98
- from Latin America	61	62	126	95	87	115	62	71	64	75	71	67	129	102	98
- from North Africa	61	62	132	94	88	116	62	71	63	73	71	67	128	102	98
- from Other Europe	61	63	130	98	88	117	62	70	64	73	70	67	128	103	98
- from South and South-East Asia	62	62	133	93	88	115	62	71	64	74	72	67	128	102	98
- from Sub-Saharan Africa	62	61	128	94	88	116	62	71	63	75	72	67	128	102	98
- from West Asia	61	63	129	94	88	118	62	71	64	76	69	67	127	102	98
<b>Max</b>	<b>64</b>	<b>66</b>	<b>138</b>	<b>99</b>	<b>90</b>	<b>120</b>	<b>63</b>	<b>73</b>	<b>65</b>	<b>77</b>	<b>77</b>	<b>69</b>	<b>136</b>	<b>104</b>	<b>101</b>
Difference in percentage points	3.2	2.4	9.4	3.8	2.2	2.8	0.9	2.8	1.2	3.9	4.9	2.2	8.9	2.5	2.5

**Table A.3: Relative change in total labour force\* between 2020 and 2060 (2020 = 100), all countries and all scenarios**

Scenario	EU+	EU27	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czechia	Denmark	Estonia	Finland	France	Germany	Greece
Baseline	89	86	98	104	62	63	101	78	102	88	94	102	89	76
Persistent high-migration event from East Asia	90	86	99	105	62	63	97	78	102	86	92	103	90	75
- from Latin America	90	87	99	105	61	65	101	78	102	84	94	103	90	76
- from North Africa	90	87	98	105	61	62	104	79	103	86	94	104	89	75
- from Other Europe	91	88	102	106	63	67	105	79	103	91	96	103	92	77
- South and South-East Asia	90	87	100	106	61	64	101	79	102	85	95	103	90	77
- from Sub-Saharan Africa	90	87	99	106	62	65	106	78	102	84	94	104	90	76
- from West Asia	90	87	103	107	61	63	102	78	104	87	95	103	92	76
Persistent migration event from East Asia	89	86	98	104	61	63	100	78	102	87	93	103	89	76
- from Latin America	90	87	99	105	62	63	103	78	103	89	92	103	89	76
- from North Africa	89	86	99	105	60	63	102	77	103	89	92	103	89	76
- from Other Europe	90	87	100	104	62	64	102	77	103	88	95	103	91	77
- from South and South-East Asia	90	87	99	104	61	63	101	78	104	87	93	103	90	75
- from Sub-Saharan Africa	90	87	98	106	62	63	100	77	102	88	93	103	90	76
- from West Asia	90	87	100	105	61	64	97	77	101	86	94	102	91	75
Short high-migration event from East Asia	89	86	98	105	62	65	100	78	101	87	94	102	89	76
- from Latin America	89	86	98	104	60	63	98	78	102	85	92	103	89	74
- from North Africa	89	86	98	104	61	63	102	78	101	87	94	102	89	75
- from Other Europe	89	86	99	104	61	64	100	78	102	84	94	102	89	75
- from South and South-East Asia	89	86	98	104	60	63	99	76	103	87	93	102	89	76
- from Sub-Saharan Africa	89	86	98	105	61	62	102	77	101	89	94	103	89	75
- from West Asia	89	86	98	105	61	63	101	77	102	89	93	103	90	76
Short migration event from East Asia	89	86	99	104	61	64	102	78	103	89	93	102	89	76
- from Latin America	89	86	100	104	62	63	99	77	102	87	94	102	89	75
- from North Africa	89	86	98	104	61	63	99	78	102	86	93	102	89	76
- from Other Europe	89	86	99	104	61	65	98	78	102	86	92	102	89	75
- from South and South-East Asia	89	86	98	103	62	62	104	78	101	86	93	102	89	74
- from Sub-Saharan Africa	89	86	98	105	62	64	99	78	101	84	94	103	89	76
- from West Asia	89	86	98	104	60	64	99	78	102	86	94	102	89	75
<b>Max</b>	<b>91</b>	<b>88</b>	<b>103</b>	<b>107</b>	<b>63</b>	<b>67</b>	<b>106</b>	<b>79</b>	<b>104</b>	<b>91</b>	<b>96</b>	<b>104</b>	<b>92</b>	<b>77</b>
Difference in percentage points (pp)	1.6	1.7	4.3	2.6	1.8	4.3	5.0	1.6	2.6	2.7	2.0	2.3	3.2	1.0



Table A.3 continued

Scenario	Hungary	Iceland	Ireland	Italy	Latvia	Lithuania	Luxemburg	Malta	Netherlands	Norway	Poland	Portugal	Romania
Baseline	<b>71</b>	<b>141</b>	<b>103</b>	<b>85</b>	<b>65</b>	<b>67</b>	<b>132</b>	<b>104</b>	<b>94</b>	<b>120</b>	<b>68</b>	<b>80</b>	<b>69</b>
Persistent high-migration event from East Asia	71	135	105	85	65	68	128	106	94	118	68	80	69
- from Latin America	71	132	107	86	66	67	137	108	95	120	68	<b>83</b>	70
- from North Africa	71	135	104	85	66	67	135	104	95	121	67	81	69
- from Other Europe	<b>71</b>	<b>143</b>	<b>107</b>	<b>87</b>	<b>69</b>	<b>69</b>	<b>141</b>	<b>110</b>	<b>95</b>	<b>123</b>	<b>69</b>	82	70
- South and South-East Asia	71	136	<b>107</b>	86	66	69	138	103	95	<b>123</b>	68	80	69
- from Sub-Saharan Africa	70	132	<b>106</b>	<b>86</b>	69	68	132	105	95	122	67	82	69
- from West Asia	71	<b>141</b>	104	85	69	66	133	108	<b>96</b>	123	68	80	<b>70</b>
Persistent migration event from East Asia	71	137	104	85	66	66	130	103	94	117	68	80	69
- from Latin America	71	138	106	86	64	66	137	104	95	119	68	82	70
- from North Africa	71	139	105	86	68	67	128	107	94	121	68	80	68
- from Other Europe	71	141	106	86	67	68	135	108	95	122	68	79	68
- from South and South-East Asia	71	139	105	86	66	66	133	103	94	121	67	80	69
- from Sub-Saharan Africa	71	141	106	86	66	66	138	108	95	122	68	80	69
- from West Asia	71	134	105	85	66	66	137	108	95	122	68	79	68
Short high-migration event from East Asia	70	143	103	85	66	64	128	111	94	120	68	79	69
- from Latin America	70	137	106	85	66	66	133	103	94	120	68	80	68
- from North Africa	70	139	106	85	65	67	138	109	94	120	68	80	68
- from Other Europe	69	139	106	85	64	67	138	108	94	121	68	80	69
- from South and South-East Asia	71	137	104	85	66	64	133	99	94	119	67	80	67
- from Sub-Saharan Africa	70	135	107	85	63	68	140	103	94	120	68	80	69
- from West Asia	70	139	104	85	65	65	135	107	94	120	68	81	68
Short migration event from East Asia	71	144	106	85	66	65	135	107	94	122	68	80	68
- from Latin America	70	134	104	85	65	67	132	105	94	119	68	80	70
- from North Africa	71	133	105	85	67	67	131	100	95	119	67	80	68
- from Other Europe	71	132	104	85	64	67	131	110	94	121	68	79	69
- from South and South-East Asia	71	136	106	85	66	66	136	104	94	120	68	79	69
- from Sub-Saharan Africa	71	142	105	85	65	64	132	104	94	119	68	81	68
- from West Asia	70	138	104	85	65	68	133	106	94	121	67	80	69
<b>Max</b>	<b>71</b>	<b>144</b>	<b>107</b>	<b>87</b>	<b>69</b>	<b>69</b>	<b>141</b>	<b>111</b>	<b>96</b>	<b>123</b>	<b>69</b>	<b>83</b>	<b>70</b>
Difference in percentage points	0.6	2.8	3.9	2.3	3.9	2.0	9.3	6.5	2.2	3.4	0.7	2.5	1.6

Table A.3 continued

Scenario	Slovakia	Slovenia	Spain	Sweden	Switzerland	UK
Baseline	<b>78</b>	<b>78</b>	<b>69</b>	<b>128</b>	<b>106</b>	<b>103</b>
Persistent high-migration event from East Asia	79	78	70	129	106	104
- from Latin America	80	76	<b>72</b>	129	107	103
- from North Africa	79	76	70	129	106	103
- from Other Europe	<b>82</b>	<b>82</b>	70	130	<b>108</b>	103
- South and South-East Asia	80	78	70	132	<b>108</b>	<b>105</b>
- from Sub-Saharan Africa	79	77	70	131	106	104
- from West Asia	79	79	69	<b>137</b>	107	103
Persistent migration event from East Asia	80	77	70	129	107	103
- from Latin America	79	77	71	129	107	103
- from North Africa	80	75	70	128	106	102
- from Other Europe	79	79	70	130	107	103
- from South and South-East Asia	80	78	70	130	106	104
- from Sub-Saharan Africa	78	75	70	129	107	104
- from West Asia	78	76	70	132	108	102
Short high-migration event from East Asia	80	77	70	129	106	103
- from Latin America	80	76	70	128	106	103
- from North Africa	79	74	70	129	105	102
- from Other Europe	80	76	69	129	106	103
- from South and South-East Asia	78	76	69	127	107	102
- from Sub-Saharan Africa	79	76	69	128	106	102
- from West Asia	80	77	70	129	106	103
Short migration event from East Asia	80	76	70	128	105	102
- from Latin America	80	76	69	129	106	102
- from North Africa	78	77	70	128	106	103
- from Other Europe	78	77	70	129	107	102
- from South and South-East Asia	79	77	70	128	107	102
- from Sub-Saharan Africa	79	78	69	129	106	102
- from West Asia	80	74	69	128	106	102
<b>Max</b>	<b>82</b>	<b>82</b>	<b>72</b>	<b>137</b>	<b>108</b>	<b>105</b>
Difference in percentage points	3.7	3.5	2.2	8.7	2.4	2.4

**Table A4: Projected proportions of the population born outside EU+ in 2020 and 2060, all scenarios, all countries**

	EU+	EU27	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czechia	Denmark	Estonia	Finland	France	Germany	Greece	Hungary
<b>Estimated % of pop. born outside EU+, 2020</b>	<b>8.7%</b>	<b>8.2%</b>	<b>11.1%</b>	<b>9.5%</b>	<b>3.1%</b>	<b>11.5%</b>	<b>12.8%</b>	<b>3.8%</b>	<b>7.6%</b>	<b>13.6%</b>	<b>5.4%</b>	<b>9.0%</b>	<b>10.7%</b>	<b>9.7%</b>	<b>2.1%</b>
<b>Baseline, 2060</b>	<b>17.0%</b>	<b>16.7%</b>	<b>19.1%</b>	<b>17.3%</b>	<b>10.4%</b>	<b>10.6%</b>	<b>22.6%</b>	<b>8.6%</b>	<b>13.9%</b>	<b>11.9%</b>	<b>15.3%</b>	<b>13.7%</b>	<b>21.4%</b>	<b>16.3%</b>	<b>5.8%</b>
Persistent high-migration event from East Asia, 2060	17.2%	16.8%	19.1%	17.4%	10.5%	10.5%	22.1%	8.8%	13.7%	12.0%	15.4%	13.9%	21.6%	16.3%	5.8%
- from Latin America, 2060	17.5%	17.1%	19.2%	17.7%	10.6%	10.3%	22.7%	8.8%	14.0%	12.7%	15.4%	13.9%	21.7%	16.7%	5.9%
- from North Africa, 2060	17.3%	16.9%	19.3%	17.5%	10.3%	10.5%	21.8%	8.7%	14.0%	12.0%	15.4%	14.0%	21.6%	16.5%	5.9%
- from Other Europe, 2060	<b>17.6%</b>	<b>17.3%</b>	<b>20.3%</b>	17.7%	<b>11.6%</b>	<b>12.1%</b>	22.2%	<b>9.4%</b>	14.2%	<b>13.6%</b>	15.8%	13.9%	<b>22.4%</b>	<b>17.3%</b>	<b>6.1%</b>
- South and South-East Asia, 2060	17.4%	17.0%	19.3%	17.7%	10.3%	10.5%	22.3%	8.6%	14.2%	12.6%	<b>15.9%</b>	13.9%	21.9%	16.7%	5.8%
- from Sub-Saharan Africa, 2060	17.4%	17.0%	19.2%	17.7%	10.5%	10.4%	23.0%	8.9%	14.1%	12.1%	15.6%	<b>14.1%</b>	21.7%	16.6%	5.9%
- from West Asia, 2060	17.5%	17.2%	19.6%	17.7%	10.7%	10.6%	<b>23.3%</b>	8.9%	14.2%	12.8%	<b>15.9%</b>	13.8%	<b>22.4%</b>	16.9%	6.0%
Persistent migration event from East Asia, 2060	17.1%	16.7%	19.1%	17.1%	10.4%	10.6%	21.6%	8.7%	13.5%	12.0%	15.2%	13.8%	21.5%	16.4%	5.7%
- from Latin America, 2060	17.3%	17.0%	19.5%	17.5%	10.6%	10.8%	22.9%	8.5%	14.2%	12.2%	15.6%	13.8%	21.6%	16.4%	5.7%
- from North Africa, 2060	17.2%	16.8%	19.1%	17.5%	10.6%	10.5%	23.1%	8.7%	13.7%	12.0%	15.2%	13.9%	21.6%	16.5%	5.7%
- from Other Europe, 2060	17.4%	17.0%	19.7%	17.5%	10.8%	11.1%	22.2%	9.0%	14.2%	12.7%	15.6%	13.8%	22.0%	16.9%	5.8%
- from South and South-East Asia, 2060	17.3%	16.9%	19.4%	17.6%	10.4%	10.9%	22.2%	8.7%	14.0%	11.8%	15.6%	13.8%	21.7%	16.7%	5.9%
- from Sub-Saharan Africa, 2060	17.3%	16.8%	19.2%	17.6%	10.4%	10.6%	22.4%	8.6%	14.0%	12.4%	15.5%	13.9%	21.6%	16.6%	5.7%
- from West Asia, 2060	17.3%	16.9%	19.5%	17.5%	10.6%	10.6%	22.6%	8.6%	14.0%	12.7%	15.6%	13.8%	21.8%	16.6%	5.7%
Short high-migration event from East Asia, 2060	17.1%	16.7%	19.1%	17.2%	10.3%	10.6%	22.9%	8.7%	13.9%	12.2%	15.1%	13.7%	21.5%	16.3%	5.7%
- from Latin America, 2060	17.1%	16.7%	19.1%	17.3%	10.4%	10.7%	22.1%	8.7%	13.8%	12.1%	15.4%	13.7%	21.4%	16.5%	5.8%
- from North Africa, 2060	17.1%	16.7%	19.1%	17.3%	10.3%	10.4%	22.6%	8.6%	13.9%	12.2%	15.3%	13.7%	21.5%	16.6%	5.7%
- from Other Europe, 2060	17.1%	16.7%	19.3%	17.2%	10.3%	10.5%	21.9%	8.7%	13.9%	12.7%	15.4%	13.7%	21.6%	16.5%	5.7%
- South and South-East Asia, 2060	17.0%	16.6%	18.9%	17.3%	10.3%	10.6%	22.1%	8.3%	13.9%	11.8%	15.0%	13.7%	21.4%	16.4%	5.6%
- from Sub-Saharan Africa, 2060	17.1%	16.7%	19.2%	17.3%	10.4%	10.5%	22.5%	8.6%	14.1%	12.1%	15.2%	13.7%	21.6%	16.6%	5.8%
- from West Asia, 2060	17.1%	16.7%	19.3%	17.4%	10.2%	10.5%	21.8%	8.6%	13.8%	11.7%	15.5%	13.7%	21.6%	16.5%	5.7%
Short migration event from East Asia, 2060	17.1%	16.7%	18.9%	17.4%	10.4%	10.3%	22.6%	8.6%	13.8%	11.8%	15.3%	13.6%	21.4%	16.5%	5.7%
- from Latin America, 2060	17.1%	16.7%	19.1%	17.4%	10.0%	10.5%	22.5%	8.7%	13.8%	11.6%	15.2%	13.6%	21.5%	16.6%	5.8%
- from North Africa, 2060	17.1%	16.7%	19.1%	17.2%	10.5%	10.6%	22.3%	8.6%	13.7%	12.4%	15.5%	13.7%	21.4%	16.2%	5.8%
- from Other Europe, 2060	17.1%	16.7%	19.2%	17.3%	10.4%	10.8%	22.3%	8.7%	13.7%	12.2%	15.5%	13.6%	21.5%	16.3%	5.6%
- South and South-East Asia, 2060	17.1%	16.7%	19.0%	17.4%	10.1%	10.7%	21.8%	8.6%	13.8%	12.3%	15.4%	13.7%	21.4%	16.5%	5.6%
- from Sub-Saharan Africa, 2060	17.0%	16.6%	19.0%	17.2%	10.4%	10.5%	22.5%	8.6%	14.0%	12.3%	15.2%	13.7%	21.5%	16.6%	5.7%
- from West Asia, 2060	17.1%	16.7%	19.1%	17.2%	10.5%	10.8%	22.5%	8.7%	13.9%	12.2%	15.2%	13.6%	21.5%	16.4%	5.7%
% increase between 2020 and 2060, Baseline	0.97	1.03	0.73	0.83	2.35	-0.09	0.77	1.26	0.82	-0.12	1.82	0.52	1.00	0.67	1.73
% increase max. scenario 2060 to 2020	1.04	1.11	0.83	0.87	2.73	0.05	0.81	1.47	0.86	0.00	1.94	0.56	1.09	0.78	1.87
Difference between the maximum and Baseline in 2060 (in pp)	0.6%	0.6%	1.2%	0.5%	1.2%	1.5%	0.6%	0.8%	0.3%	1.7%	0.6%	0.4%	1.0%	1.0%	0.3%

Table A.4 continued

	Iceland	Ireland	Italy	Latvia	Lithuania	Luxemb.	Malta	Netherlands	Norway	Poland	Portugal	Romania	Slovakia	Slovenia	Spain
<b>Estimated % of pop. born outside EU+, 2020</b>	<b>6.7%</b>	<b>7.6%</b>	<b>8.2%</b>	<b>13.1%</b>	<b>7.4%</b>	<b>10.2%</b>	<b>6.8%</b>	<b>10.0%</b>	<b>10.1%</b>	<b>2.0%</b>	<b>8.2%</b>	<b>2.3%</b>	<b>1.4%</b>	<b>10.6%</b>	<b>9.8%</b>
<b>Baseline, 2060</b>	<b>15.2%</b>	<b>14.6%</b>	<b>20.9%</b>	<b>12.3%</b>	<b>14.0%</b>	<b>19.0%</b>	<b>17.1%</b>	<b>16.3%</b>	<b>20.7%</b>	<b>6.6%</b>	<b>16.6%</b>	<b>9.7%</b>	<b>5.5%</b>	<b>14.9%</b>	<b>18.4%</b>
Persistent high-migration event from East Asia, 2060	15.4%	14.5%	21.0%	12.3%	14.3%	18.1%	17.5%	16.6%	21.0%	6.6%	16.8%	10.2%	5.7%	14.8%	18.6%
- from Latin America, 2060	15.9%	14.7%	<b>21.4%</b>	12.4%	14.0%	<b>19.9%</b>	17.4%	16.6%	21.2%	6.7%	<b>17.8%</b>	<b>10.6%</b>	5.5%	15.2%	<b>19.7%</b>
- from North Africa, 2060	15.5%	14.1%	21.2%	12.3%	14.4%	17.9%	18.1%	16.4%	20.9%	6.6%	16.8%	10.1%	5.7%	15.0%	18.9%
- from Other Europe, 2060	16.1%	14.6%	21.5%	<b>13.3%</b>	<b>15.4%</b>	19.6%	17.2%	<b>16.8%</b>	21.4%	<b>7.2%</b>	16.6%	10.5%	<b>5.9%</b>	<b>17.8%</b>	18.8%
- South and South-East Asia, 2060	16.4%	<b>14.8%</b>	<b>21.4%</b>	12.2%	14.2%	18.8%	18.1%	16.6%	21.5%	6.7%	17.0%	10.1%	5.6%	14.9%	18.6%
- from Sub-Saharan Africa, 2060	<b>16.9%</b>	14.6%	21.3%	12.1%	14.2%	18.7%	<b>18.6%</b>	16.6%	21.5%	6.7%	17.0%	10.1%	5.7%	15.2%	18.7%
- from West Asia, 2060	16.5%	<b>14.8%</b>	21.0%	12.0%	14.8%	19.2%	17.2%	<b>16.8%</b>	<b>21.8%</b>	6.7%	17.1%	10.1%	5.8%	15.1%	18.6%
Persistent migration event from East Asia, 2060	15.7%	14.1%	20.9%	12.4%	13.9%	16.8%	15.9%	16.3%	20.2%	6.6%	16.5%	9.8%	5.3%	15.1%	18.3%
- from Latin America, 2060	14.9%	14.5%	21.2%	11.7%	14.0%	19.9%	17.5%	16.6%	21.6%	6.7%	17.7%	10.3%	5.5%	15.1%	19.4%
- from North Africa, 2060	15.3%	14.5%	21.1%	12.2%	13.7%	18.7%	18.0%	16.5%	20.8%	6.6%	16.7%	10.1%	5.6%	14.9%	18.6%
- from Other Europe, 2060	15.6%	14.3%	21.2%	12.7%	14.7%	18.5%	16.4%	16.5%	21.2%	6.8%	16.9%	10.0%	5.8%	16.0%	18.5%
- from South and South-East Asia, 2060	15.2%	14.4%	21.2%	12.6%	14.6%	19.0%	17.0%	16.5%	21.2%	6.7%	16.8%	10.0%	5.6%	14.9%	18.5%
- from Sub-Saharan Africa, 2060	15.4%	14.3%	21.1%	12.1%	14.2%	19.5%	17.5%	16.5%	21.0%	6.6%	16.9%	9.9%	5.7%	14.8%	18.5%
- from West Asia, 2060	15.6%	14.6%	20.9%	12.3%	14.5%	19.3%	17.2%	16.5%	21.3%	6.6%	16.7%	9.9%	5.5%	15.2%	18.4%
Short high-migration event from East Asia, 2060	15.6%	14.4%	20.9%	12.0%	14.0%	19.6%	18.1%	16.1%	20.9%	6.6%	16.8%	10.0%	5.6%	15.1%	18.4%
- from Latin America, 2060	14.9%	14.4%	20.9%	12.3%	14.4%	18.5%	17.6%	16.3%	20.7%	6.5%	16.7%	10.0%	5.5%	14.9%	18.6%
- from North Africa, 2060	14.5%	14.5%	20.8%	12.1%	14.1%	18.4%	17.5%	16.3%	20.8%	6.5%	16.7%	9.9%	5.7%	15.1%	18.4%
- from Other Europe, 2060	15.4%	14.3%	20.9%	12.9%	14.1%	19.0%	17.8%	16.3%	20.9%	6.6%	16.6%	10.0%	5.5%	15.4%	18.5%
- South and South-East Asia, 2060	16.0%	14.3%	20.8%	12.2%	14.2%	18.3%	16.9%	16.2%	20.8%	6.2%	16.7%	9.8%	5.5%	14.8%	18.4%
- from Sub-Saharan Africa, 2060	15.4%	14.2%	20.8%	12.3%	14.2%	19.0%	16.8%	16.3%	20.8%	6.6%	16.7%	9.8%	5.5%	15.0%	18.5%
- from West Asia, 2060	15.3%	14.1%	20.8%	11.9%	14.3%	18.2%	17.2%	16.3%	20.7%	6.5%	16.6%	10.0%	5.3%	14.9%	18.4%
Short migration event from East Asia, 2060	14.7%	14.4%	20.8%	12.2%	13.9%	19.3%	17.5%	16.4%	20.8%	6.6%	16.7%	9.8%	5.4%	14.7%	18.5%
- from Latin America, 2060	15.7%	14.4%	20.8%	11.9%	13.5%	18.5%	16.9%	16.4%	20.9%	6.6%	16.6%	9.8%	5.7%	15.1%	18.6%
- from North Africa, 2060	15.9%	14.5%	20.8%	12.2%	13.8%	18.4%	16.3%	16.2%	21.1%	6.5%	16.7%	9.9%	5.4%	15.1%	18.5%
- from Other Europe, 2060	15.1%	14.2%	20.8%	12.4%	14.3%	18.0%	16.6%	16.3%	20.8%	6.6%	17.0%	10.1%	5.5%	15.5%	18.4%
- South and South-East Asia, 2060	15.7%	14.3%	20.8%	12.4%	14.2%	18.3%	17.2%	16.3%	21.0%	6.5%	16.7%	10.0%	5.5%	14.8%	18.5%
- from Sub-Saharan Africa, 2060	16.4%	14.2%	20.8%	12.2%	14.5%	19.1%	17.3%	16.2%	21.0%	6.5%	16.5%	9.9%	5.5%	15.1%	18.5%
- from West Asia, 2060	15.4%	14.4%	20.8%	12.2%	14.1%	18.9%	16.6%	16.3%	20.9%	6.6%	16.9%	10.0%	5.3%	15.1%	18.4%
% increase between 2020 and 2060, Baseline	1.27	0.92	1.56	-0.06	0.89	0.87	1.53	0.63	1.05	2.24	1.02	3.19	2.83	0.41	0.87
% increase max. scenario 2060 to 2020	1.52	0.95	1.63	0.01	1.08	0.95	1.75	0.68	1.16	2.54	1.17	3.61	3.10	0.68	1.01
Difference between the maximum and Baseline in 2060 (in pp)	1.7%	0.2%	0.6%	0.9%	1.4%	0.8%	1.5%	0.5%	1.1%	0.6%	1.2%	1.0%	0.4%	2.9%	1.4%

Table A.4 continued

	Sweden	Switzerland	UK
<b>Estimated % of pop. born outside EU+, 2020</b>	<b>14.5%</b>	<b>12.5%</b>	<b>11.1%</b>
<b>Baseline, 2060</b>	<b>28.2%</b>	<b>19.8%</b>	<b>18.6%</b>
Persistent high-migration event from East Asia, 2060	28.3%	20.1%	18.9%
- from Latin America, 2060	28.5%	20.4%	18.9%
- from North Africa, 2060	28.3%	20.1%	18.7%
- from Other Europe, 2060	28.9%	<b>20.6%</b>	18.8%
- South and South-East Asia, 2060	28.7%	20.0%	<b>19.2%</b>
- from Sub-Saharan Africa, 2060	28.9%	20.2%	18.9%
- from West Asia, 2060	<b>29.6%</b>	20.4%	18.8%
Persistent migration event from East Asia, 2060	28.3%	19.9%	18.9%
- from Latin America, 2060	28.3%	20.2%	18.6%
- from North Africa, 2060	28.3%	20.0%	18.7%
- from Other Europe, 2060	28.6%	20.4%	18.8%
- from South and South-East Asia, 2060	28.6%	20.2%	19.0%
- from Sub-Saharan Africa, 2060	28.6%	20.0%	18.8%
- from West Asia, 2060	28.9%	20.2%	18.7%
Short high-migration event from East Asia, 2060	28.2%	19.9%	18.7%
- from Latin America, 2060	28.2%	20.1%	18.8%
- from North Africa, 2060	28.3%	19.9%	18.6%
- from Other Europe, 2060	28.2%	19.9%	18.7%
- South and South-East Asia, 2060	28.3%	20.0%	18.6%
- from Sub-Saharan Africa, 2060	28.4%	20.0%	18.6%
- from West Asia, 2060	28.4%	19.9%	18.7%
Short migration event from East Asia, 2060	28.3%	20.0%	18.6%
- from Latin America, 2060	28.2%	19.9%	18.7%
- from North Africa, 2060	28.2%	20.1%	18.7%
- from Other Europe, 2060	28.1%	19.9%	18.7%
- South and South-East Asia, 2060	28.2%	19.9%	18.7%
- from Sub-Saharan Africa, 2060	28.1%	19.7%	18.6%
- from West Asia, 2060	28.3%	20.0%	18.7%
% increase between 2020 and 2060, Baseline	0.94	0.58	0.68
% increase max. scenario 2060 to 2020	1.04	0.65	0.74
Difference between the maximum and Baseline in 2060 (in pp)	1.4%	0.9%	0.6%

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## Appendix B

**Figure B.1 Relative change in total population size (2020 = 100), by country, all scenarios**

**Figure B.2 Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline, (2020 = 100)**

**Figure B.3 Composition of foreign-born populations in selected countries in 2020 and in 2060 in Baseline and Persistent high-migration events scenarios**



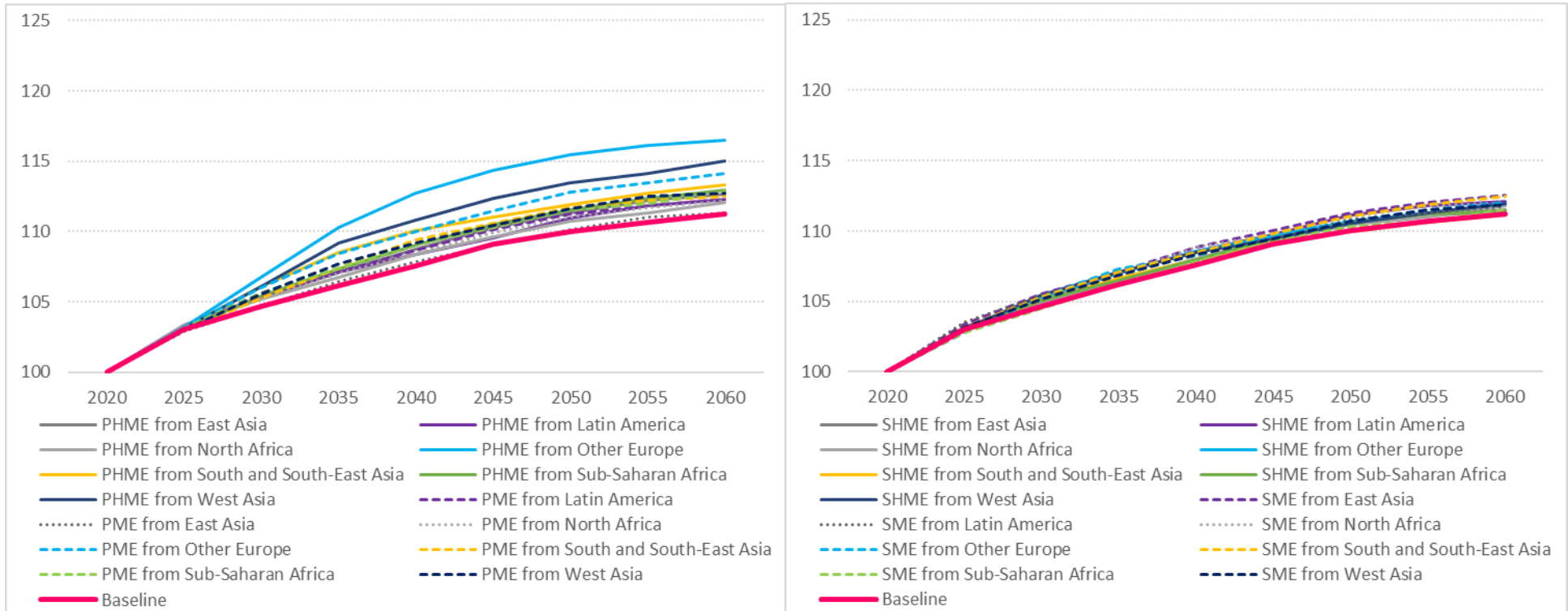




# AUSTRIA

## Relative change in total population size (2020 = 100)

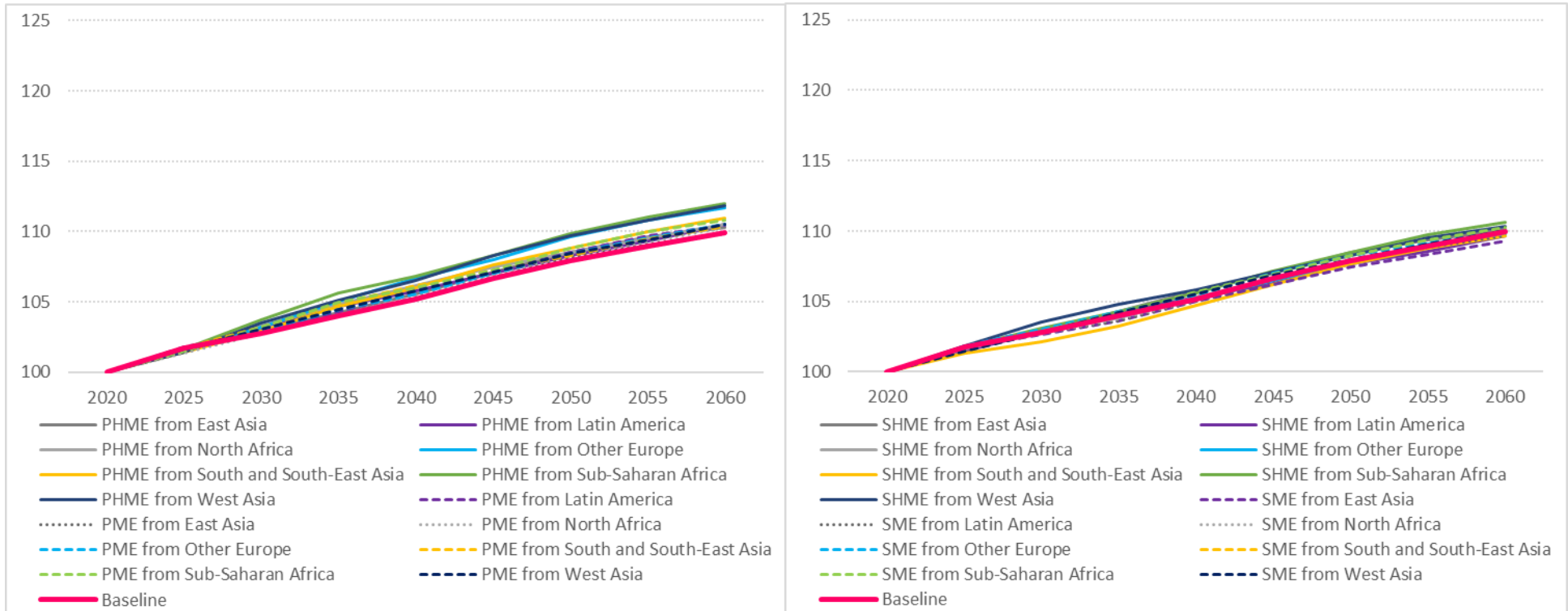
Persistent high-migration events (PHME) and Persistent migration events (PME)   Short high-migration events (SHME) and Short migration events (SME)



# BELGIUM

## Relative change in total population size (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)   Short high-migration events (SHME) and Short migration events (SME)





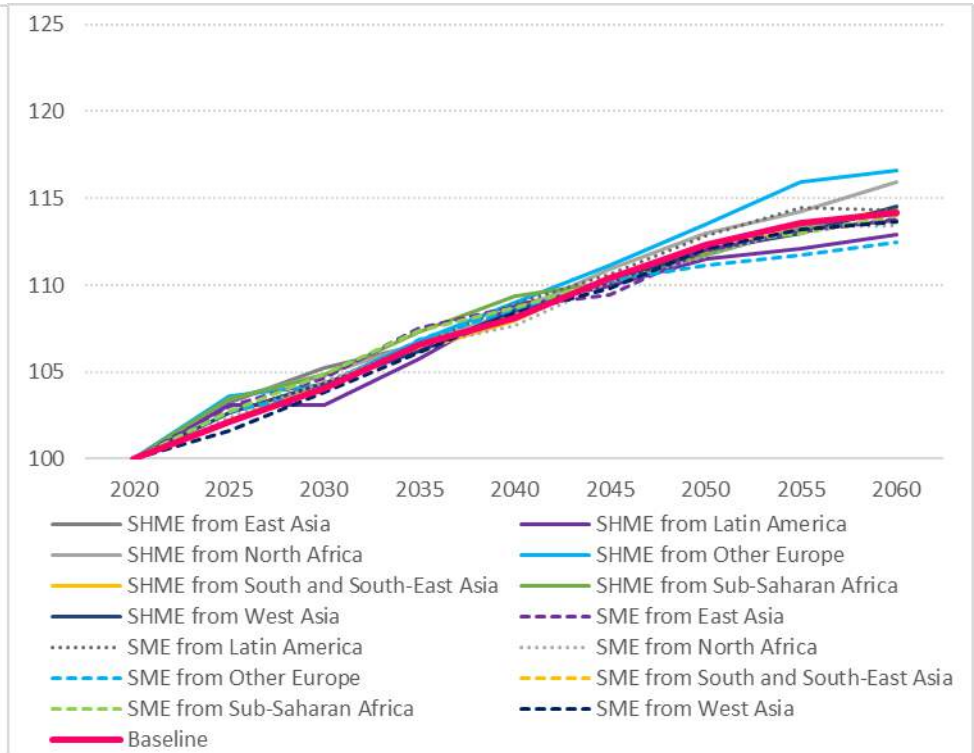
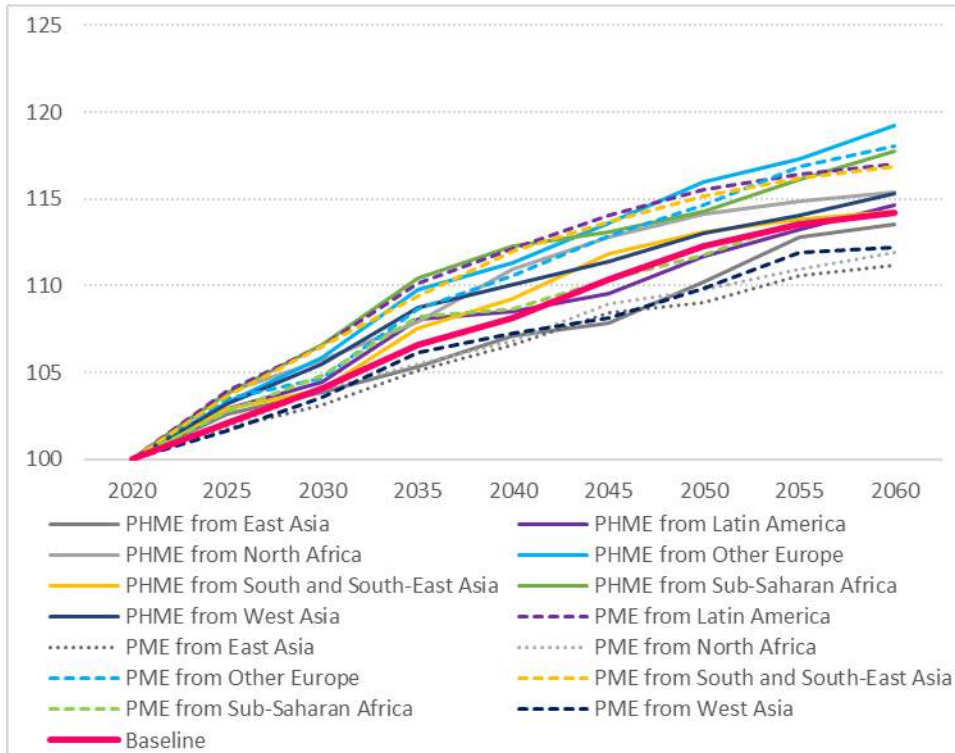


# CYPRUS

## Relative change in total population size (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)

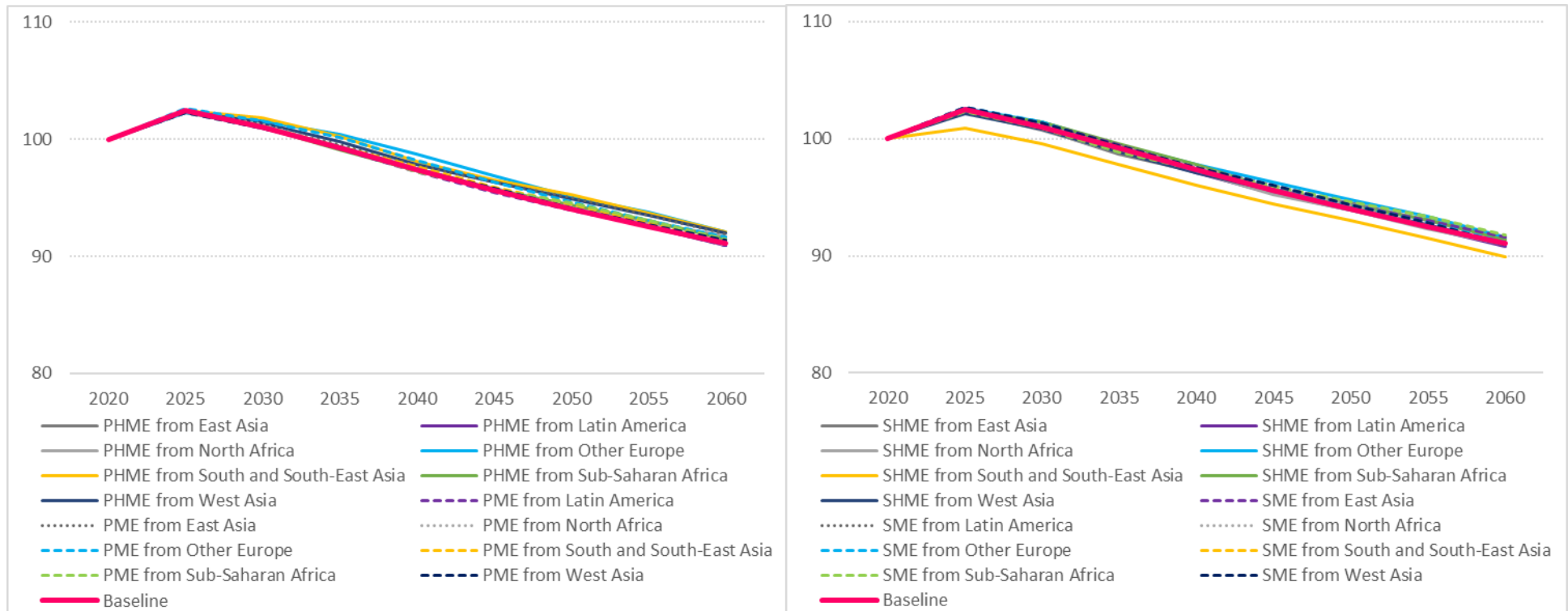
Short high-migration events (SHME) and Short migration events (SME)



# CZECHIA

## Relative change in total population size (2020 = 100)

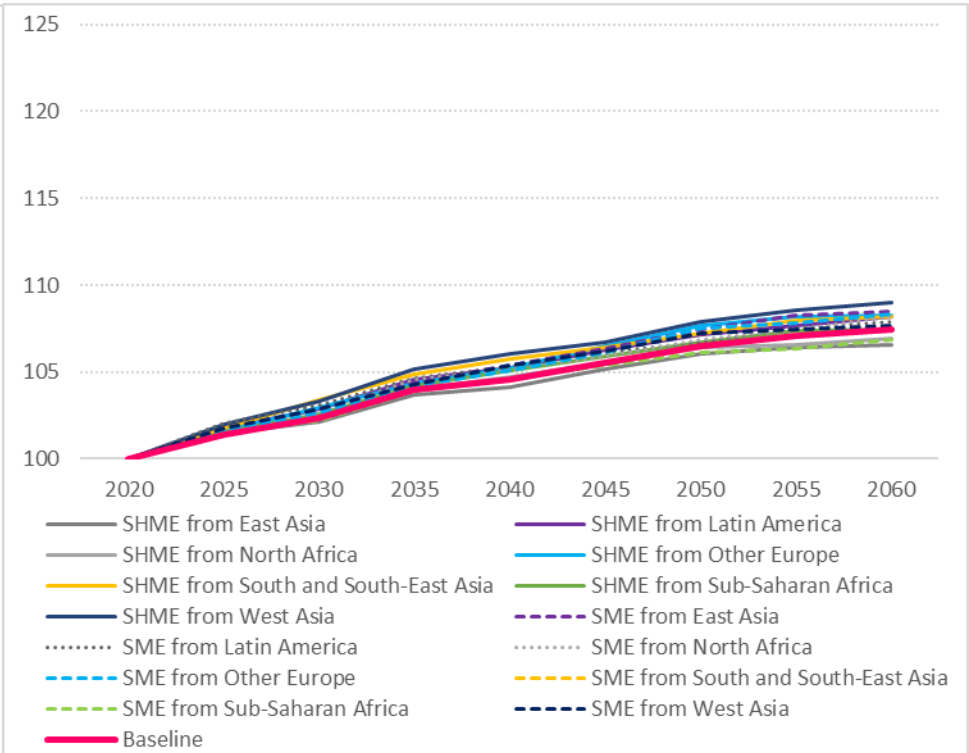
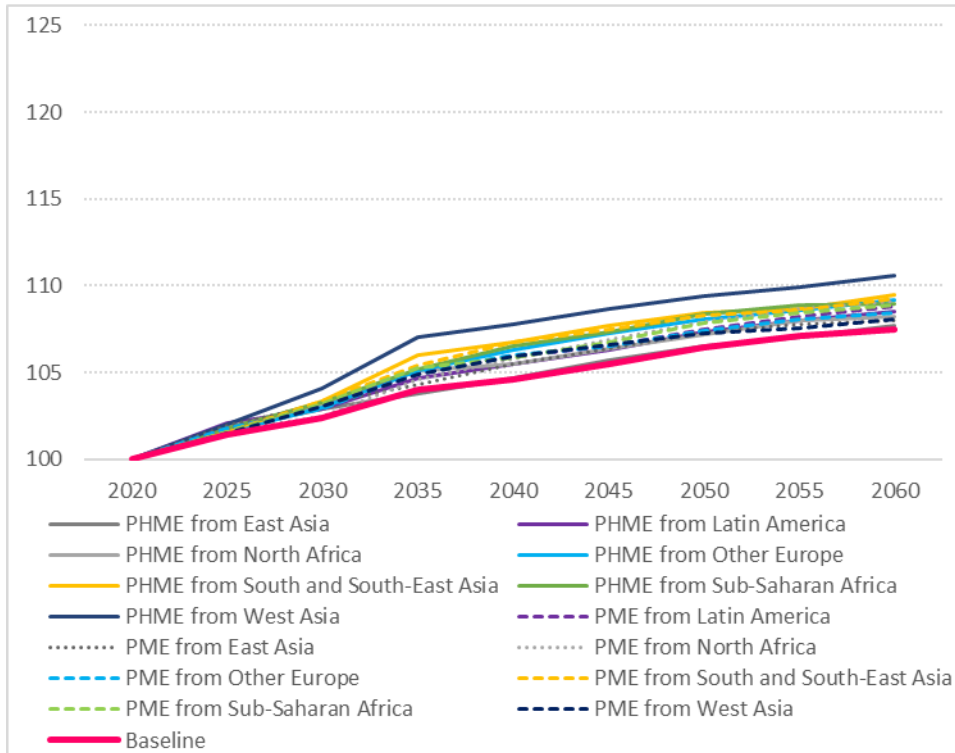
Persistent high-migration events (PHME) and Persistent migration events (PME)    Short high-migration events (SHME) and Short migration events (SME)



# DENMARK

## Relative change in total population size (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)   Short high-migration events (SHME) and Short migration events (SME)





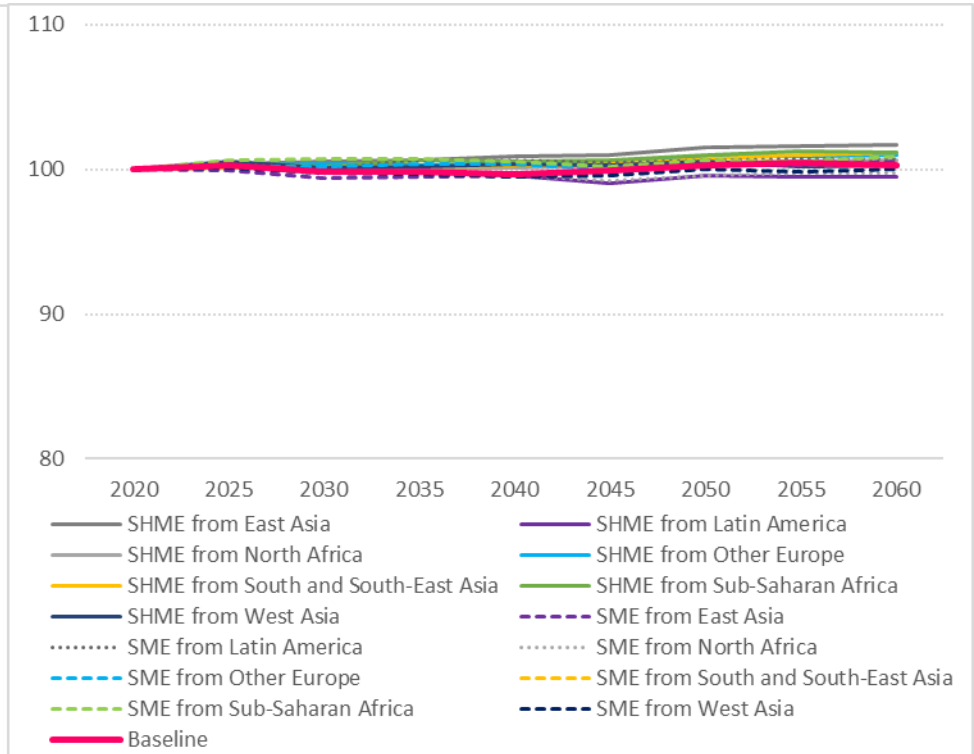
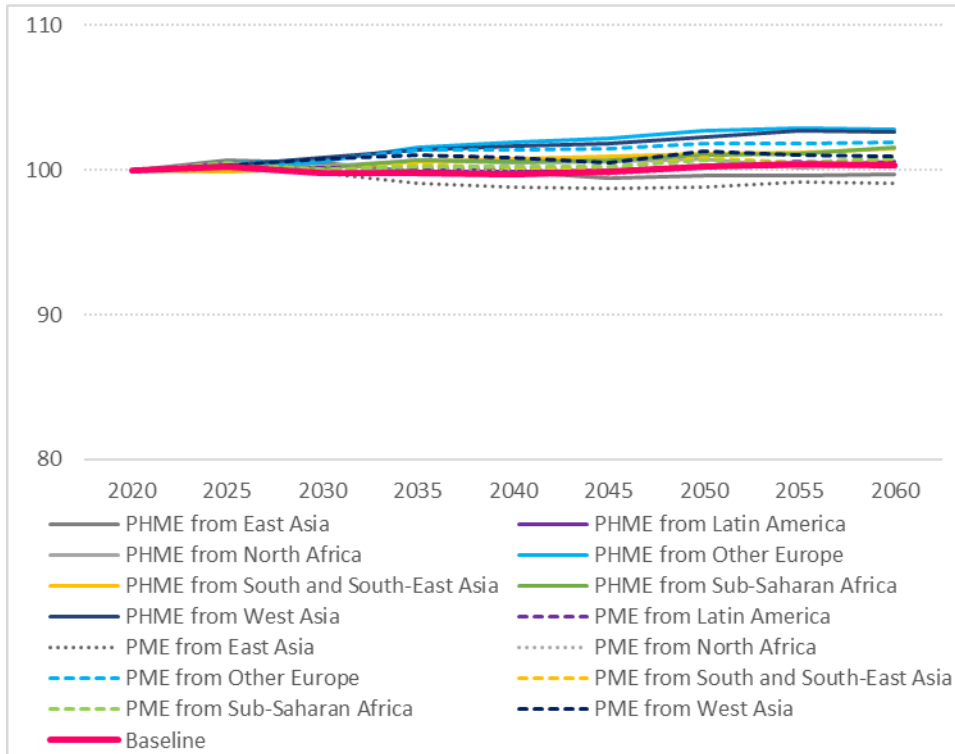


# FINLAND

## Relative change in total population size (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)

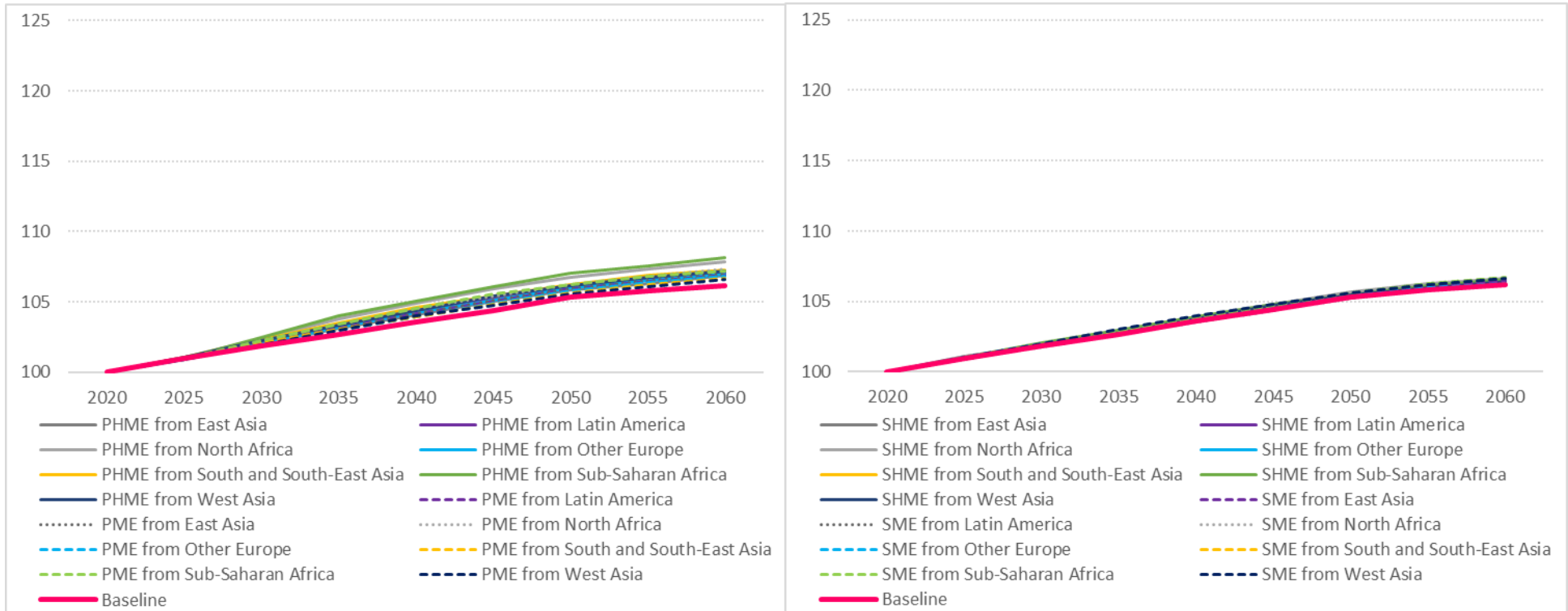
Short high-migration events (SHME) and Short migration events (SME)



# FRANCE

## Relative change in total population size (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)   Short high-migration events (SHME) and Short migration events (SME)





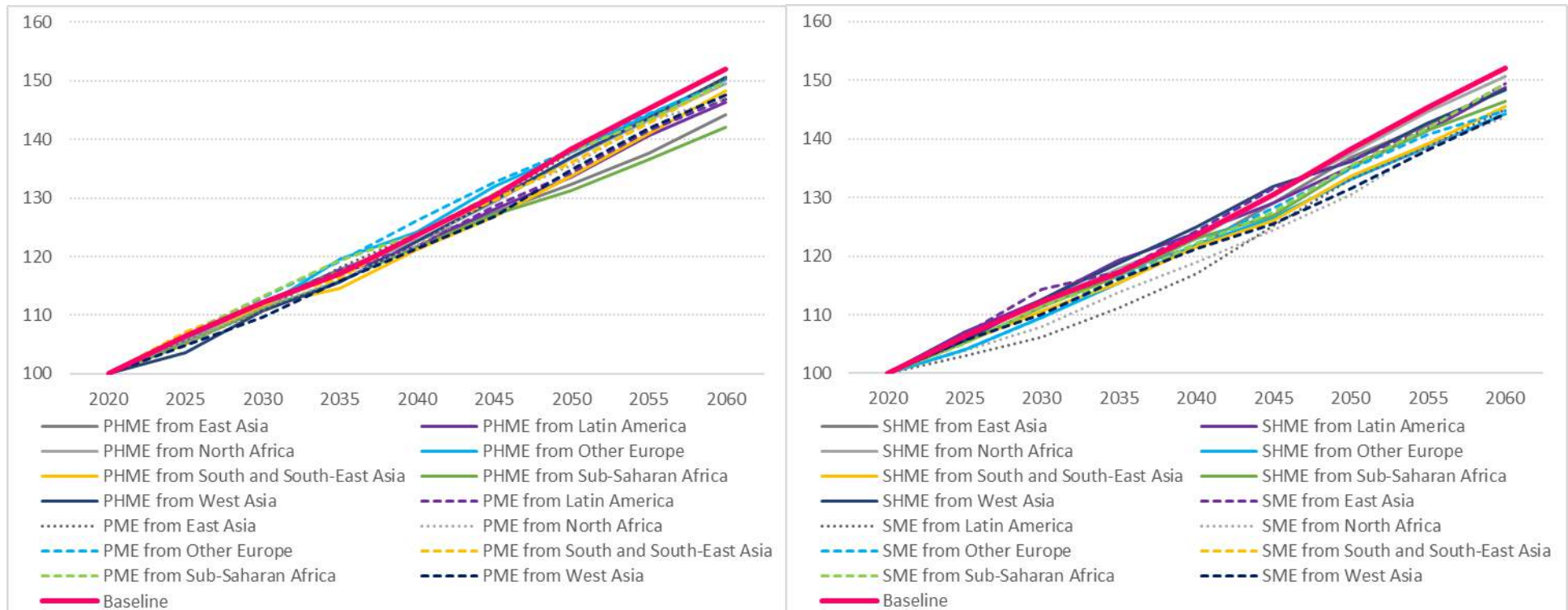




# ICELAND

## Relative change in total population size (2020 = 100)

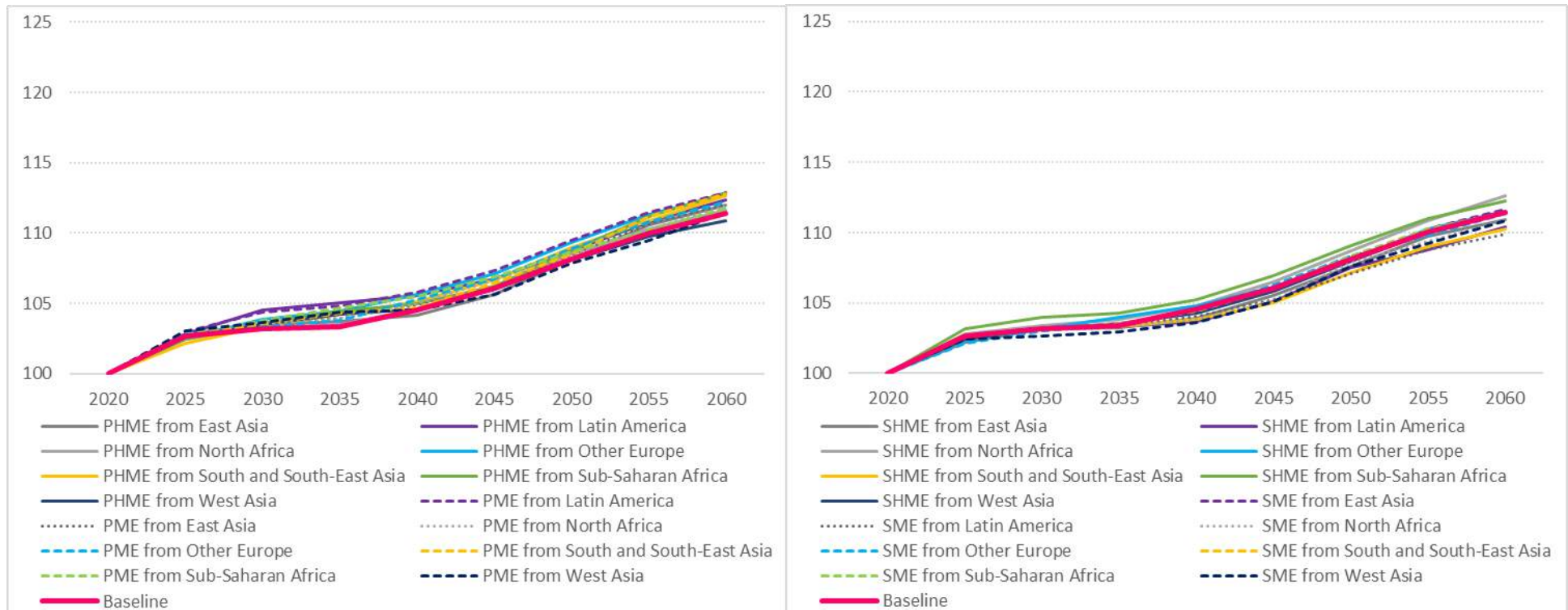
Persistent high-migration events (PHME) and Persistent migration events (PME)    Short high-migration events (SHME) and Short migration events (SME)



## IRELAND

### Relative change in total population size (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)    Short high-migration events (SHME) and Short migration events (SME)





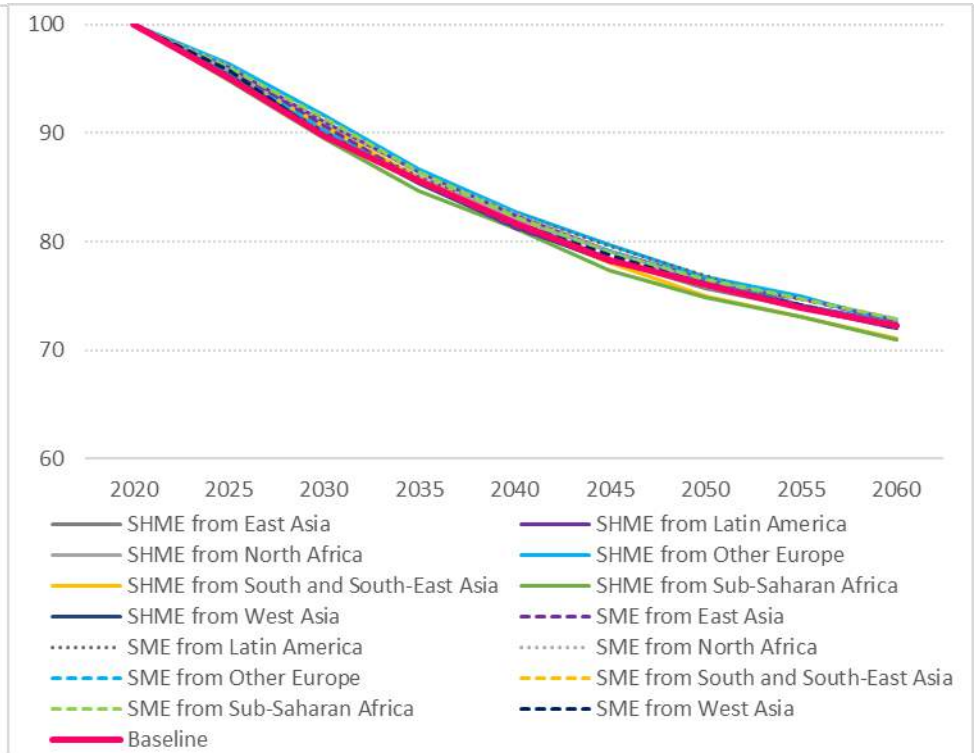
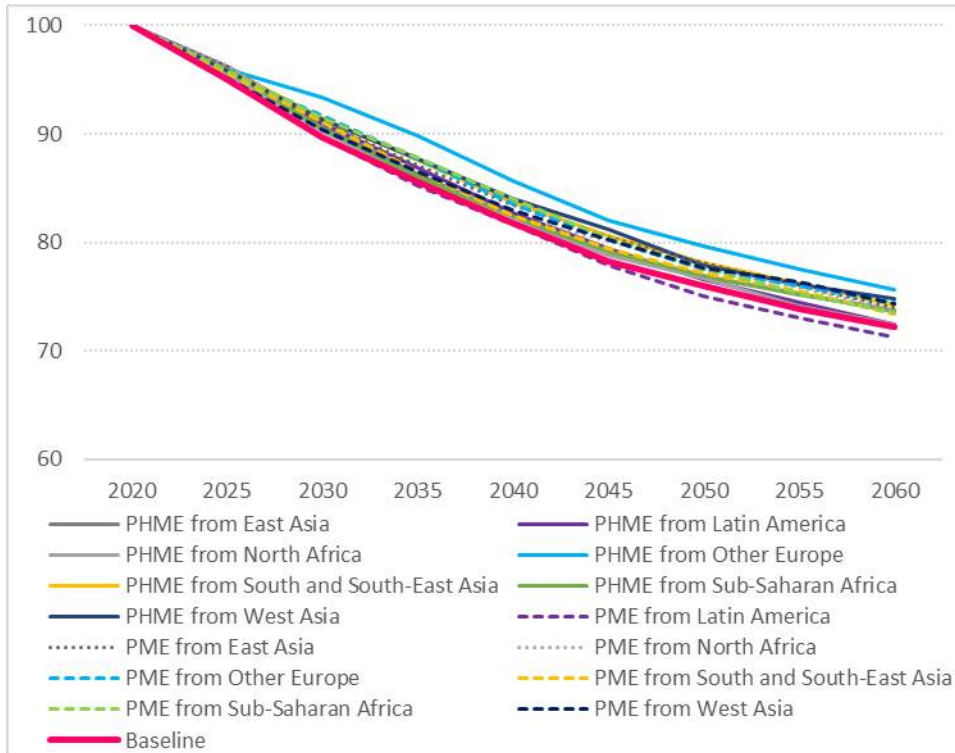


# LATVIA

## Relative change in total population size (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)

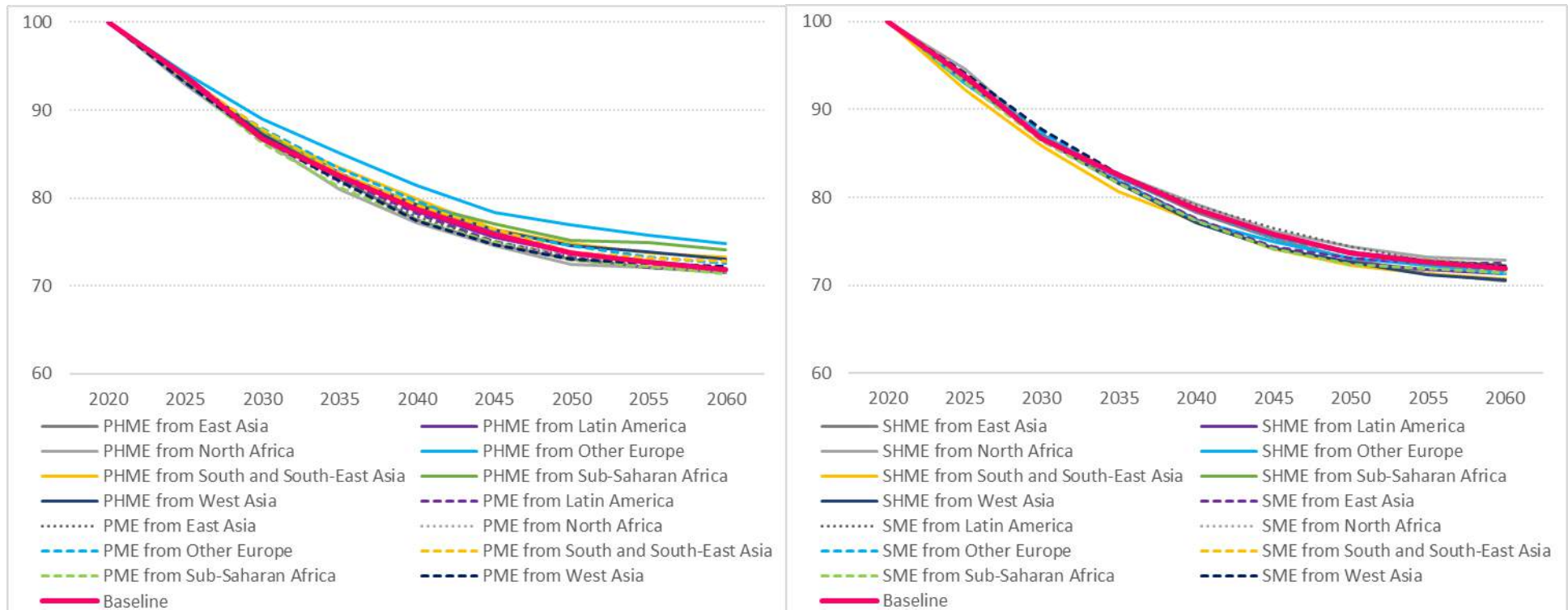
Short high-migration events (SHME) and Short migration events (SME)



# LITHUANIA

## Relative change in total population size (2020 = 100)

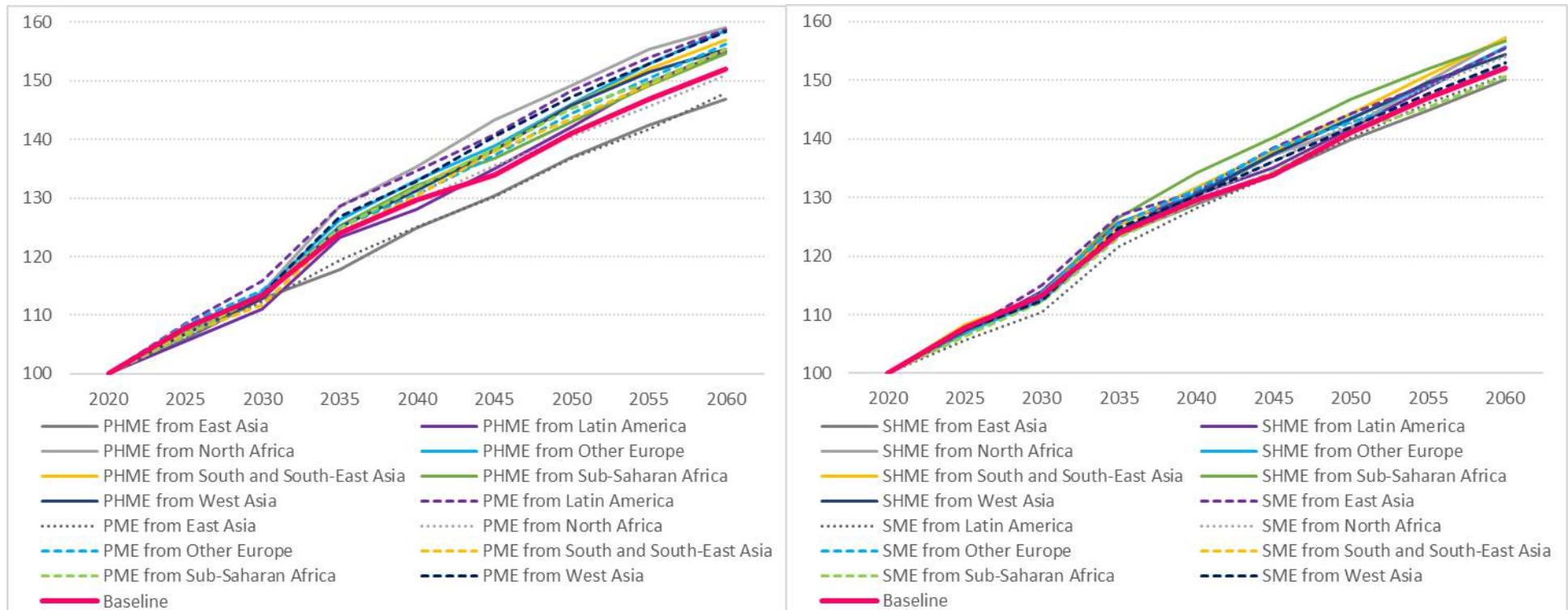
Persistent high-migration events (PHME) and Persistent migration events (PME)    Short high-migration events (SHME) and Short migration events (SME)



# LUXEMBURG

## Relative change in total population size (2020 = 100)

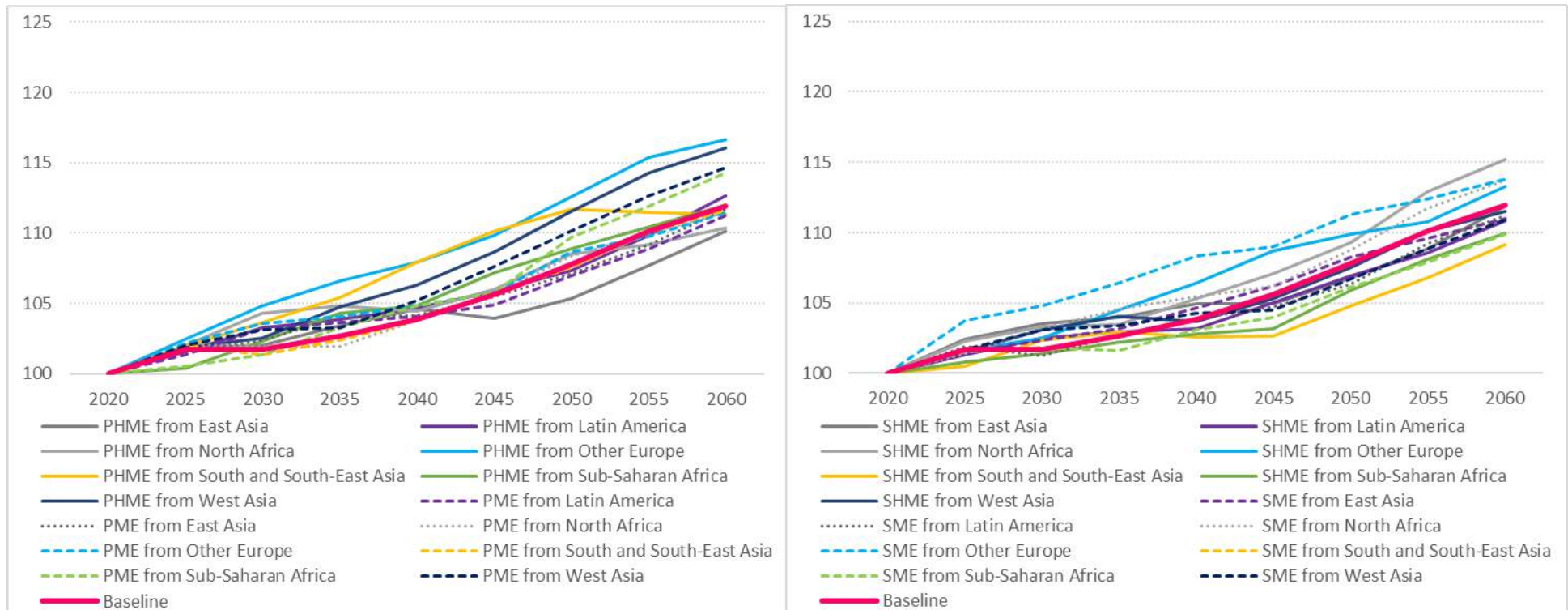
Persistent high-migration events (PHME) and Persistent migration events (PME)    Short high-migration events (SHME) and Short migration events (SME)



# MALTA

## Relative change in total population size (2020 = 100)

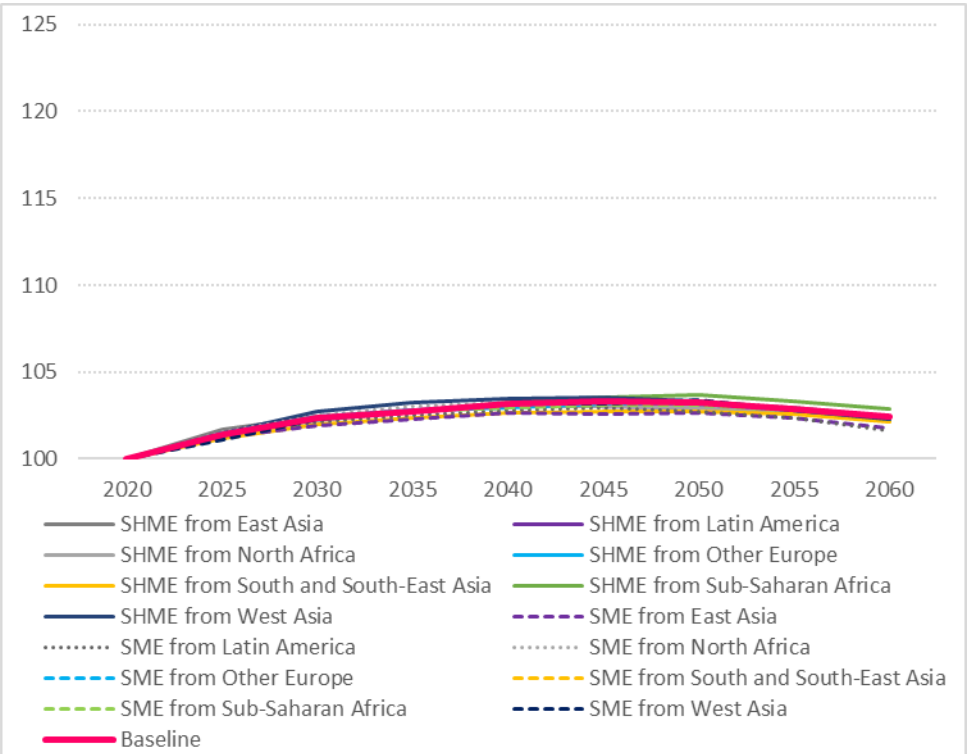
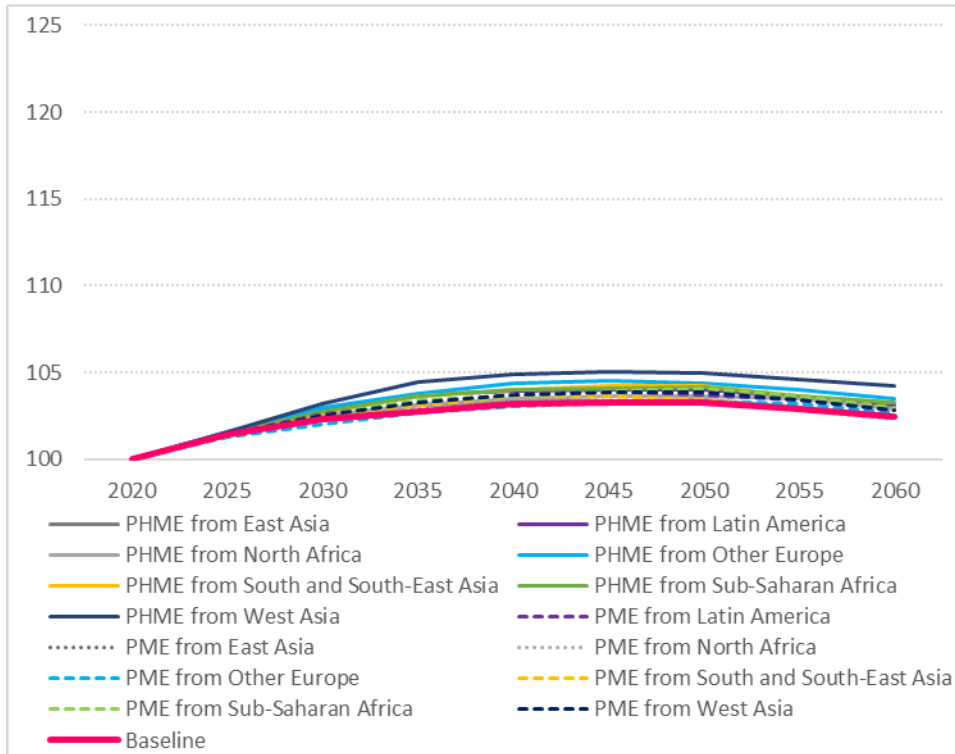
Persistent high-migration events (PHME) and Persistent migration events (PME)    Short high-migration events (SHME) and Short migration events (SME)



# NETHERLANDS

## Relative change in total population size (2020 = 100)

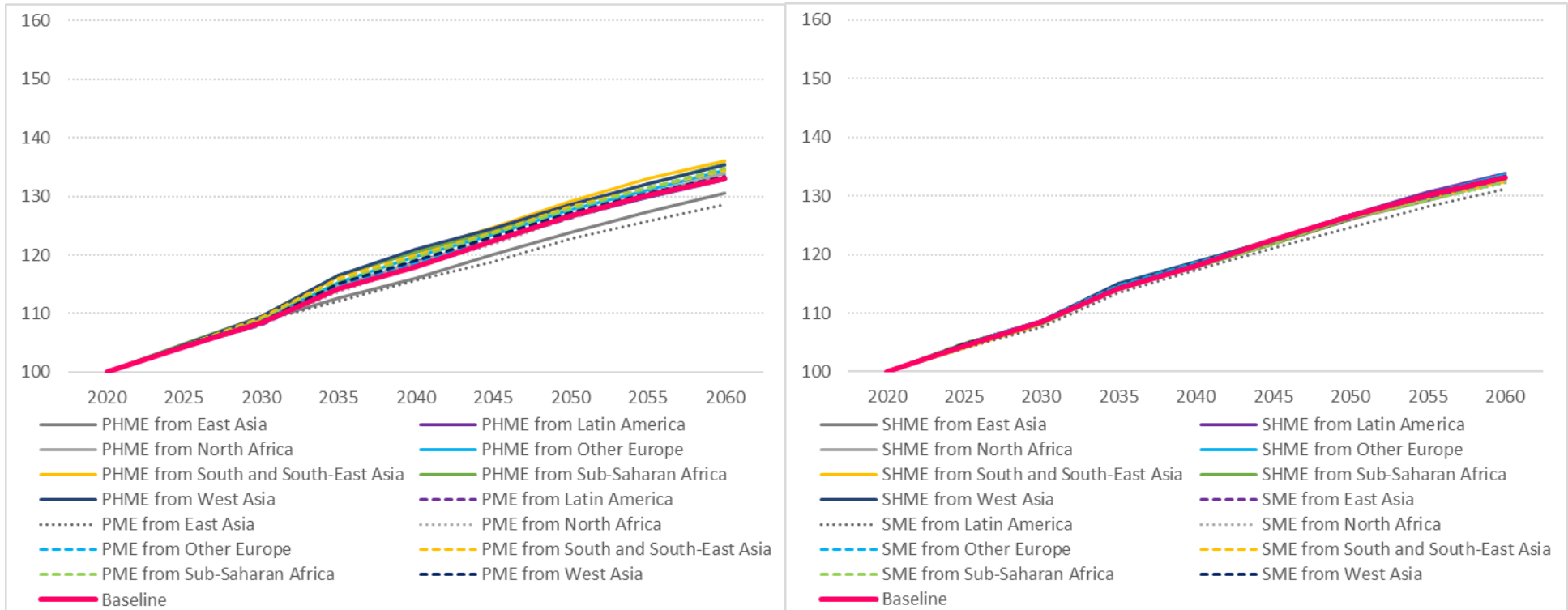
Persistent high-migration events (PHME) and Persistent migration events (PME)    Short high-migration events (SHME) and Short migration events (SME)



# NORWAY

## Relative change in total population size (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)   Short high-migration events (SHME) and Short migration events (SME)



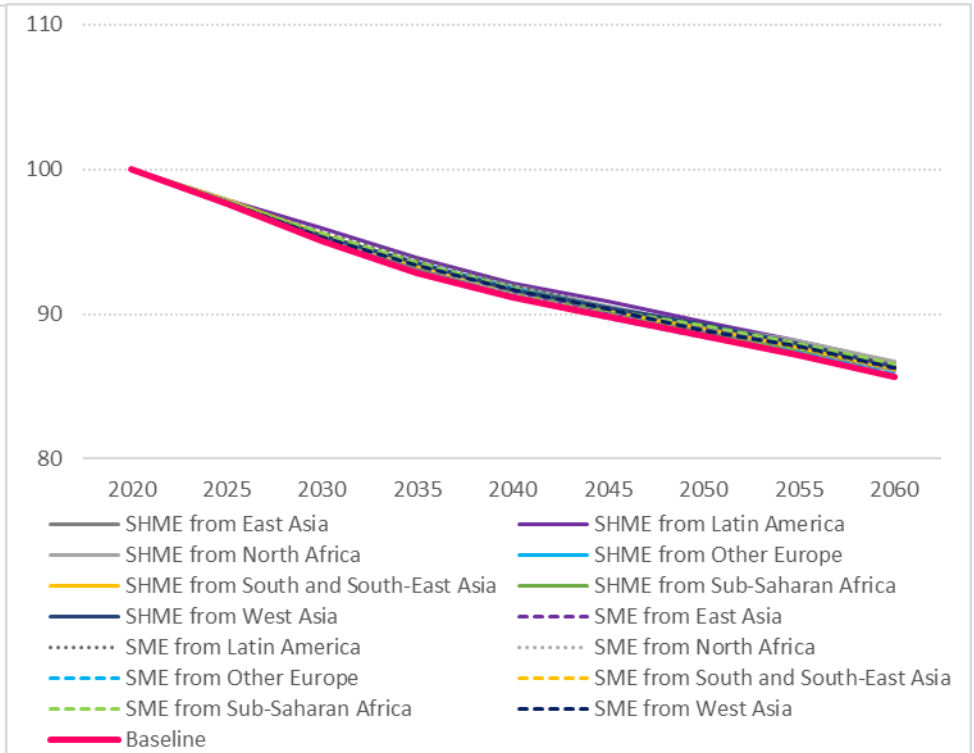
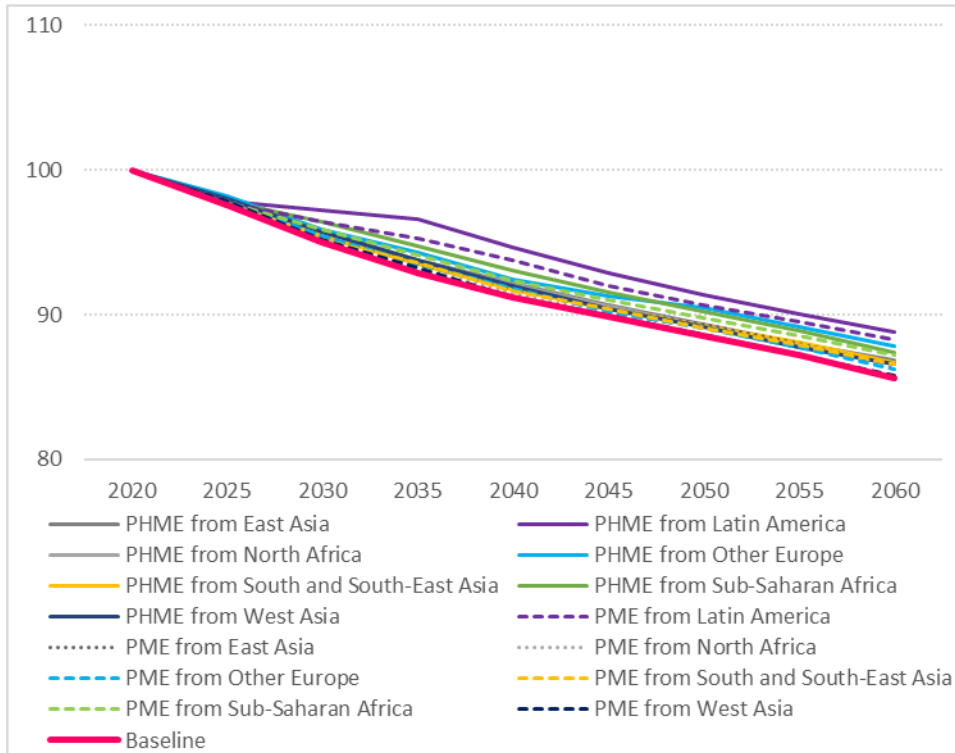


# PORTUGAL

## Relative change in total population size (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)

Short high-migration events (SHME) and Short migration events (SME)









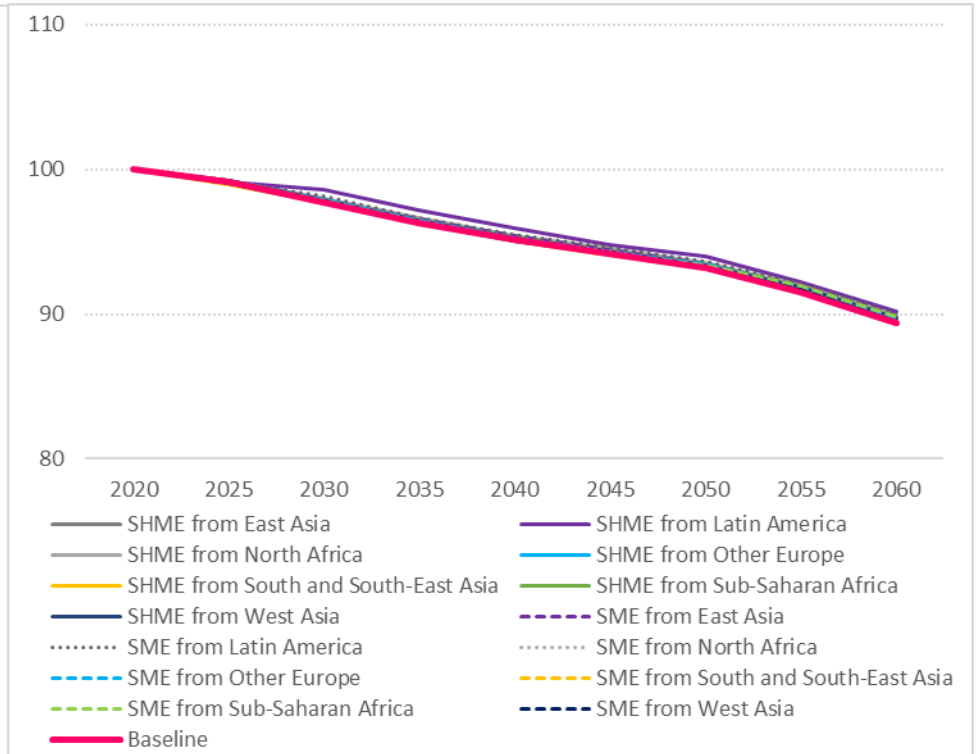
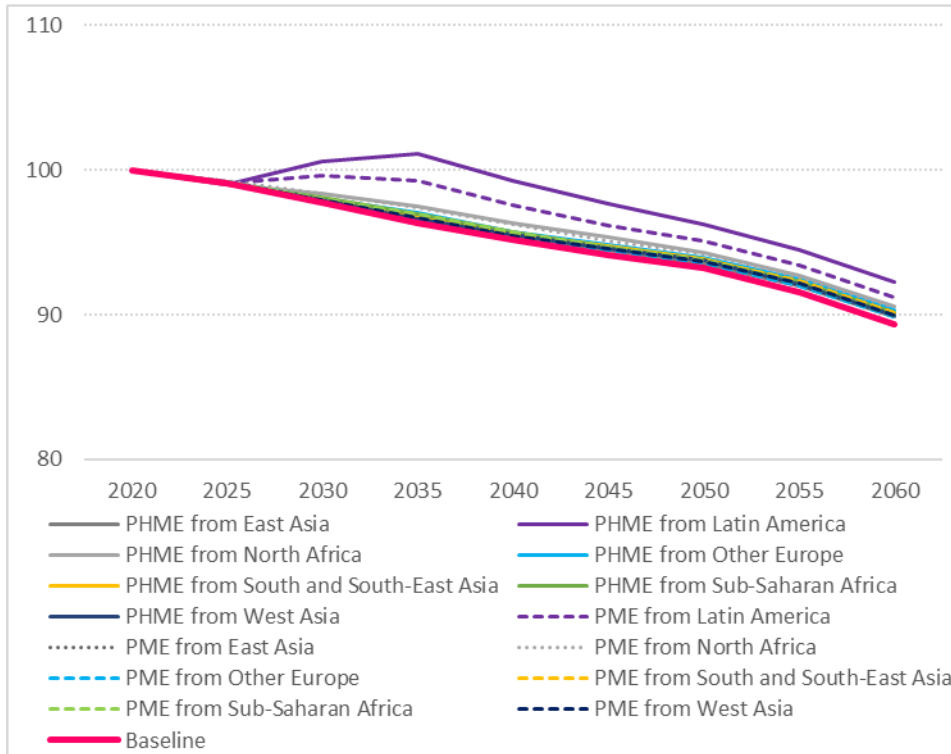


# SPAIN

## Relative change in total population size (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)

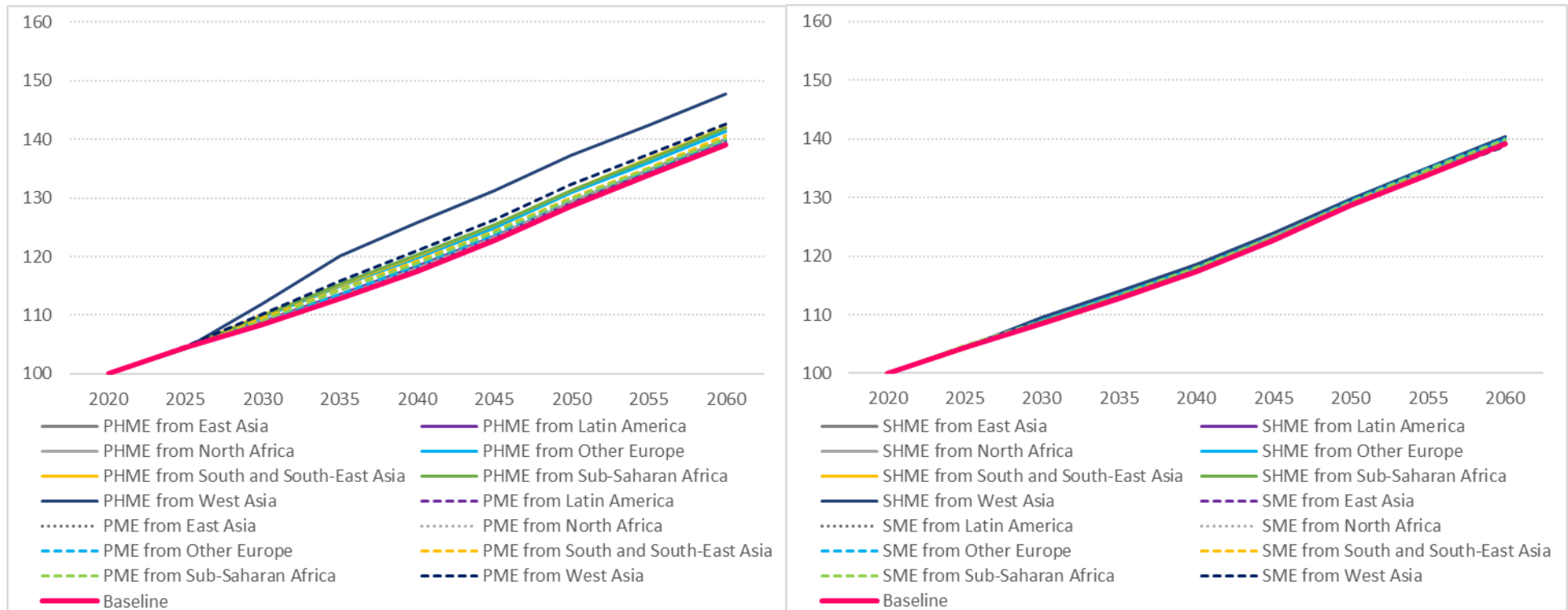
Short high-migration events (SHME) and Short migration events (SME)



# SWEDEN

## Relative change in total population size (2020 = 100)

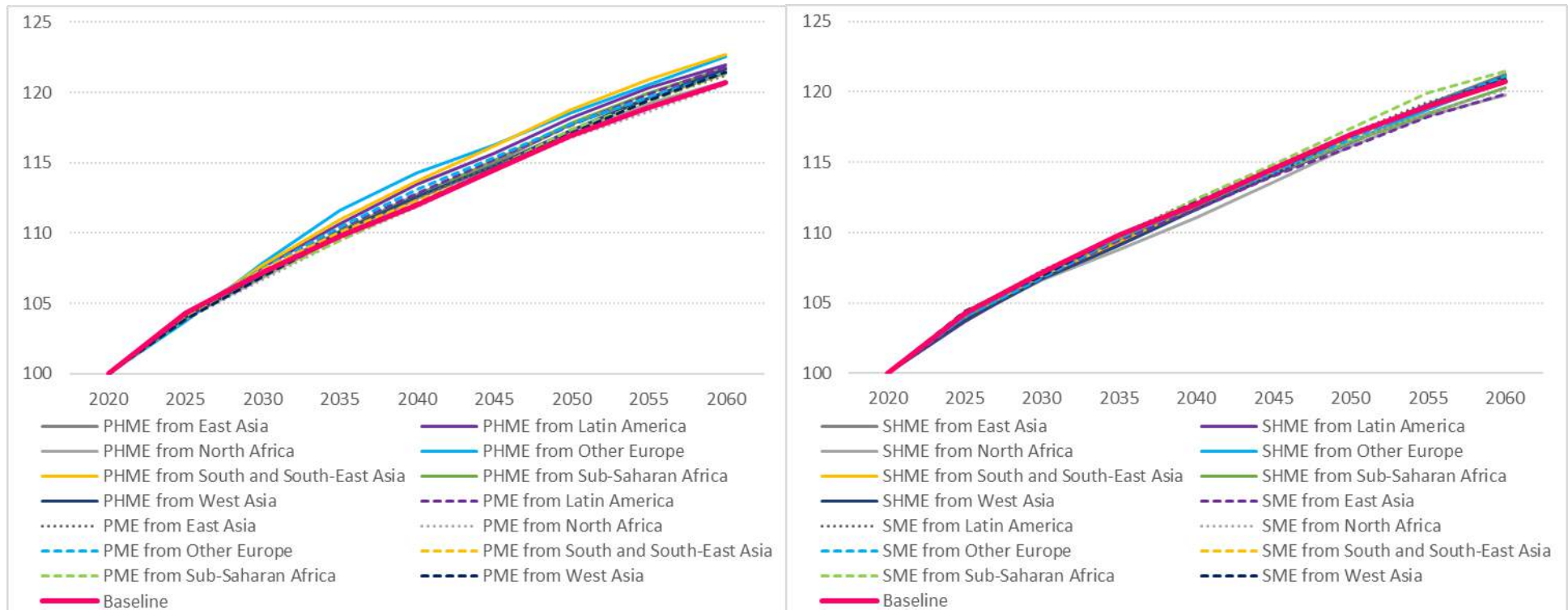
Persistent high-migration events (PHME) and Persistent migration events (PME)    Short high-migration events (SHME) and Short migration events (SME)



## SWITZERLAND

### Relative change in total population size (2020 = 100)

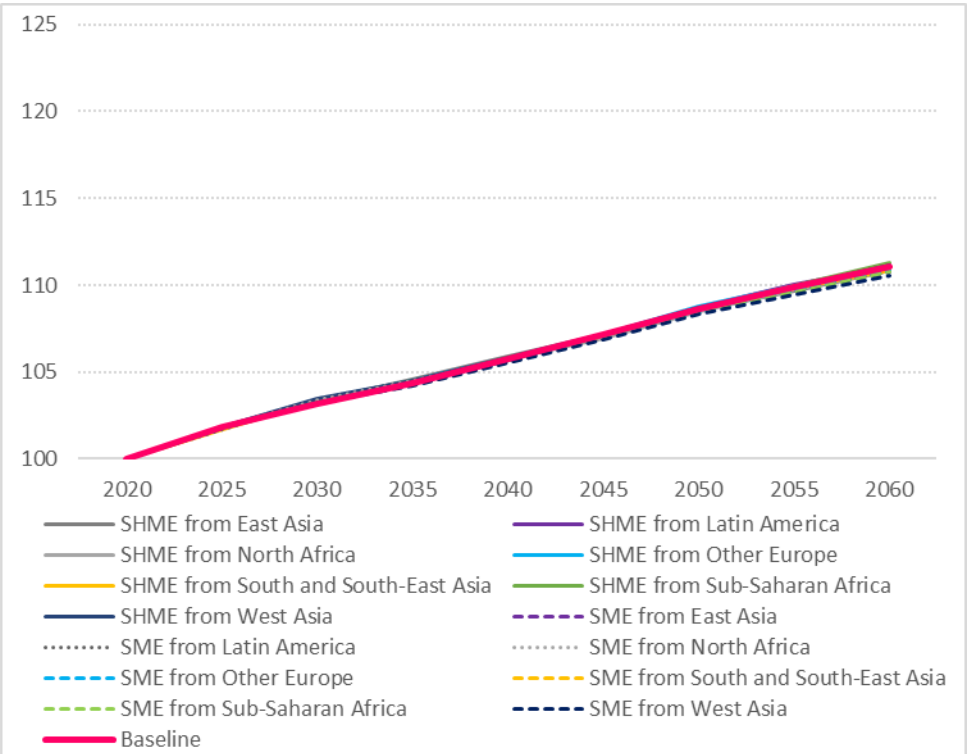
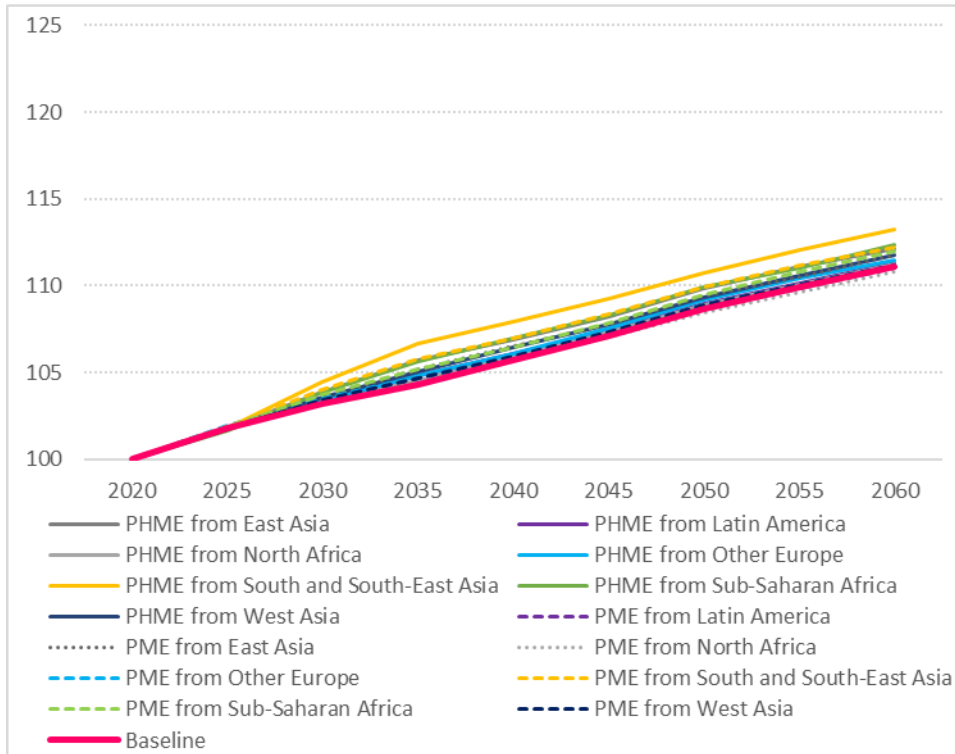
Persistent high-migration events (PHME) and Persistent migration events (PME)   Short high-migration events (SHME) and Short migration events (SME)



# UNITED KINGDOM

Relative change in total population size (2020 = 100)

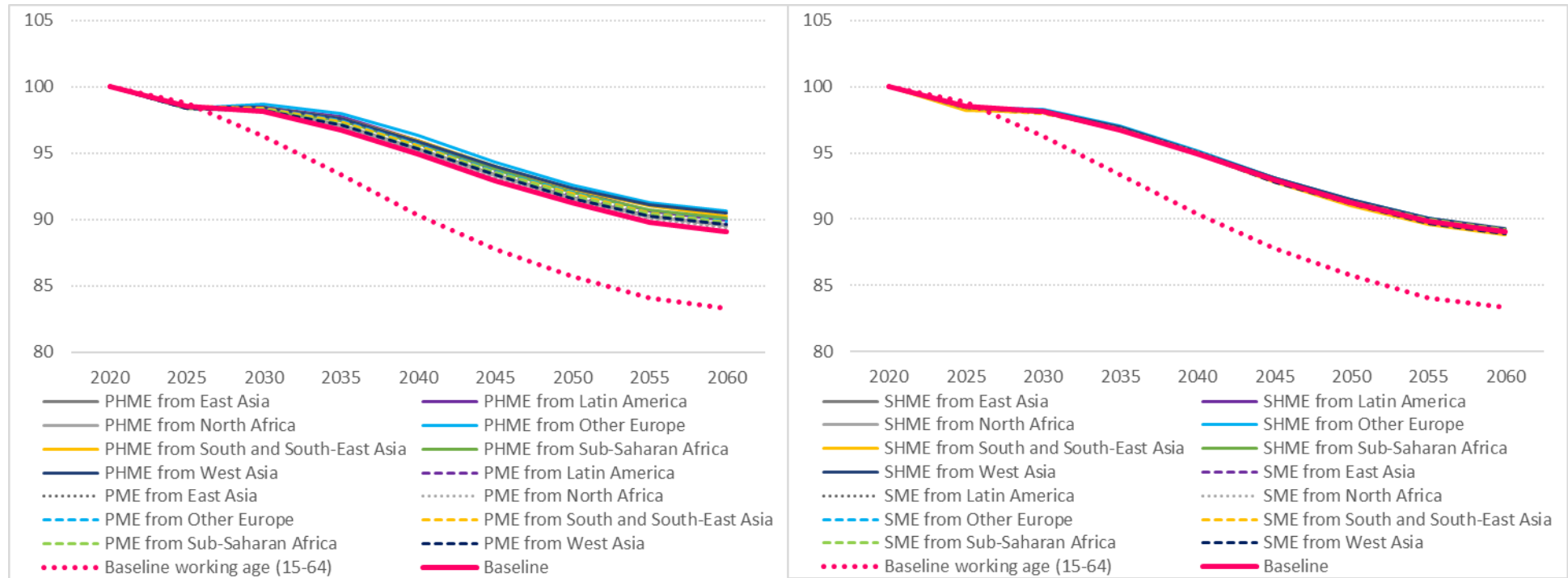
Persistent high-migration events (PHME) and Persistent migration events (PME)   Short high-migration events (SHME) and Short migration events (SME)



# EU+

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)    Short high-migration events (SHME) and Short migration events (SME)



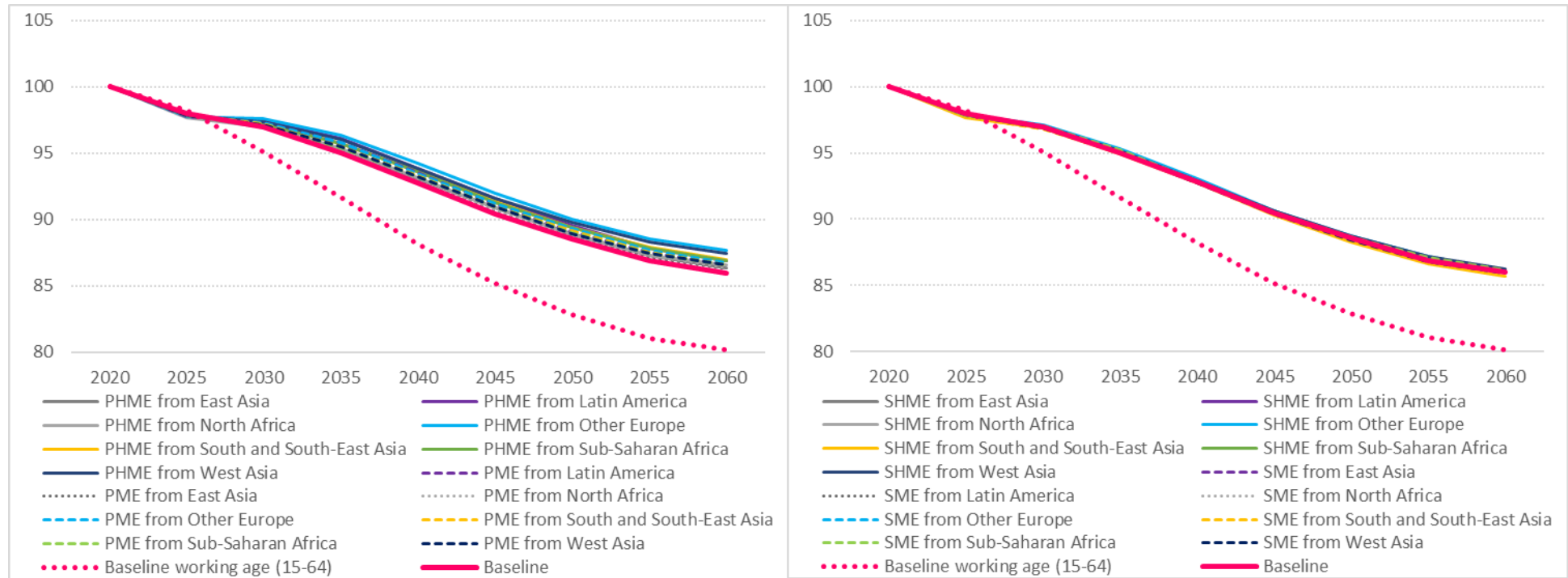
Note: \* persons can be active in the labour force between age 15 and 74



# EU27

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)   Short high-migration events (SHME) and Short migration events (SME)

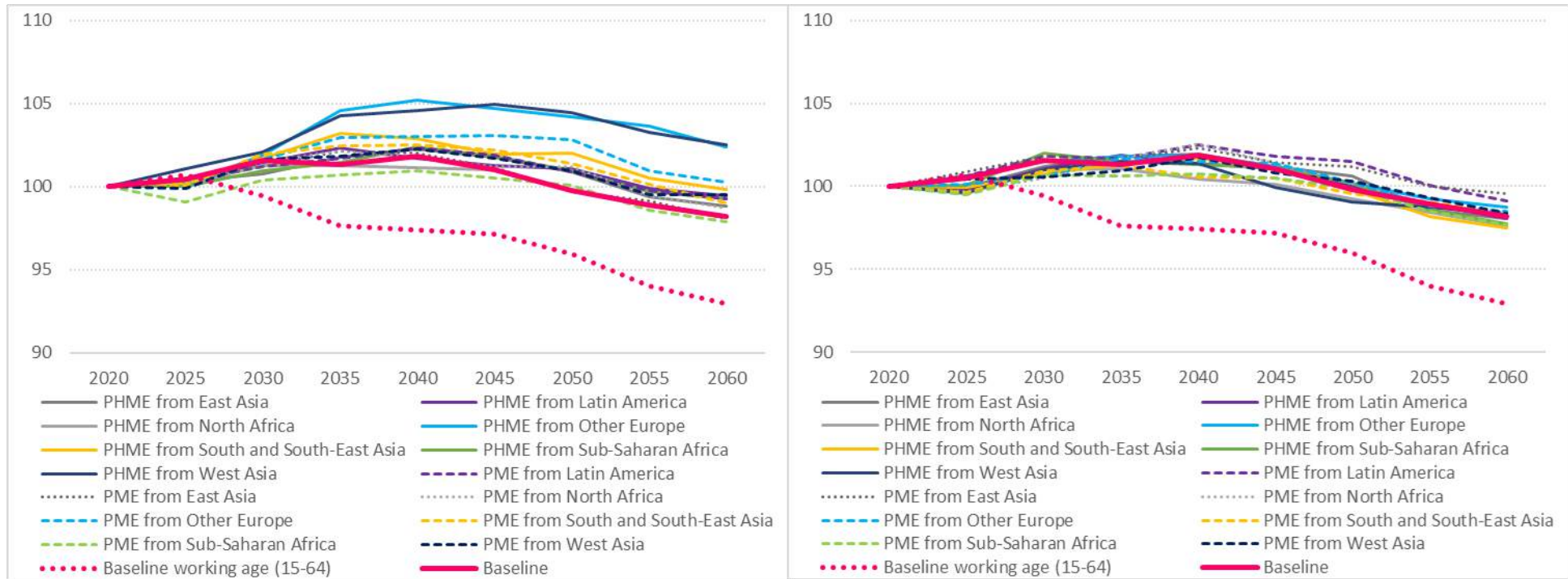


Note: \* persons can be active in the labour force between age 15 and 74

## AUSTRIA

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)   Short high-migration events (SHME) and Short migration events (SME)

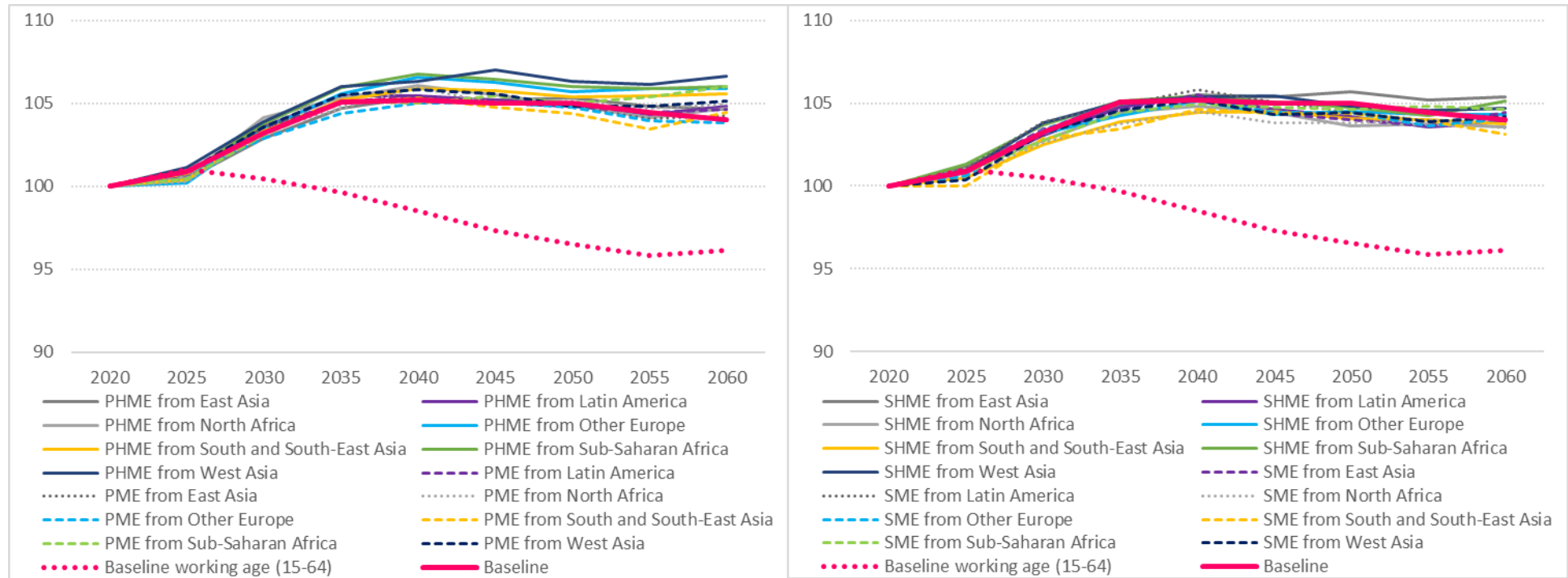


Note: \* persons can be active in the labour force between age 15 and 74

# BELGIUM

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)   Short high-migration events (SHME) and Short migration events (SME)

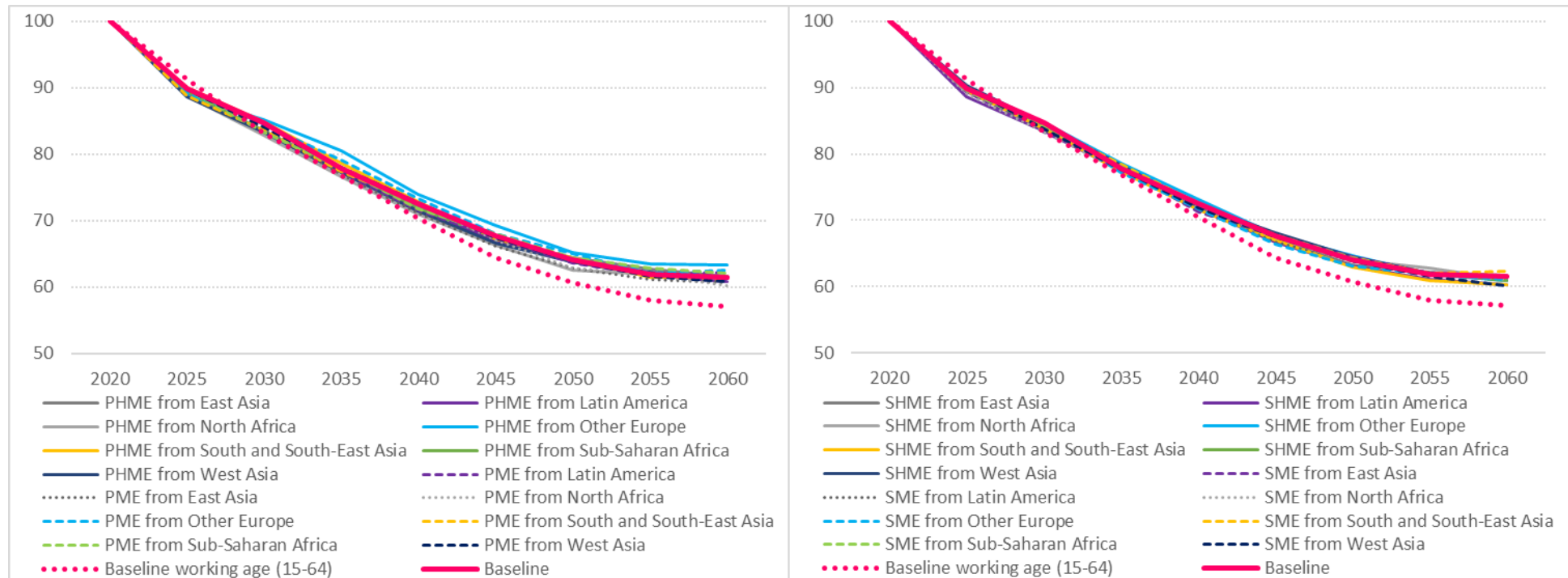


Note: \* persons can be active in the labour force between age 15 and 74

## BULGARIA

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)    Short high-migration events (SHME) and Short migration events (SME)

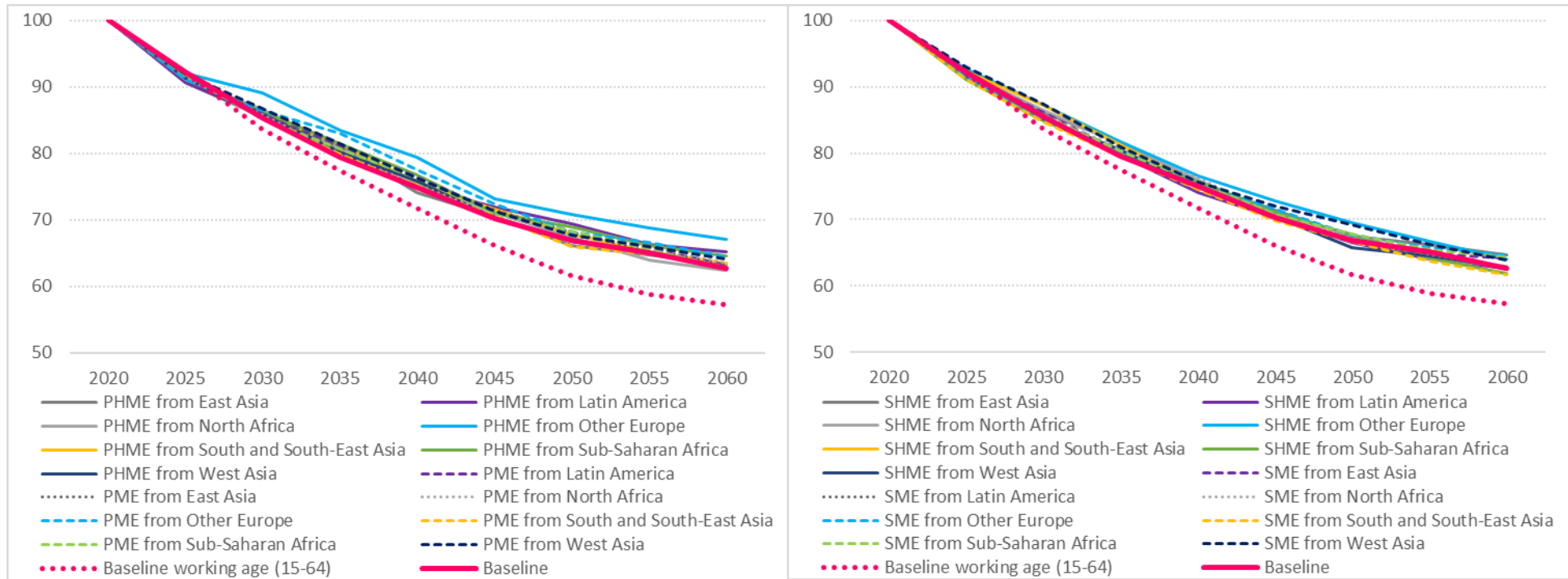


Note: \* persons can be active in the labour force between age 15 and 74

## CROATIA

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)    Short high-migration events (SHME) and Short migration events (SME)

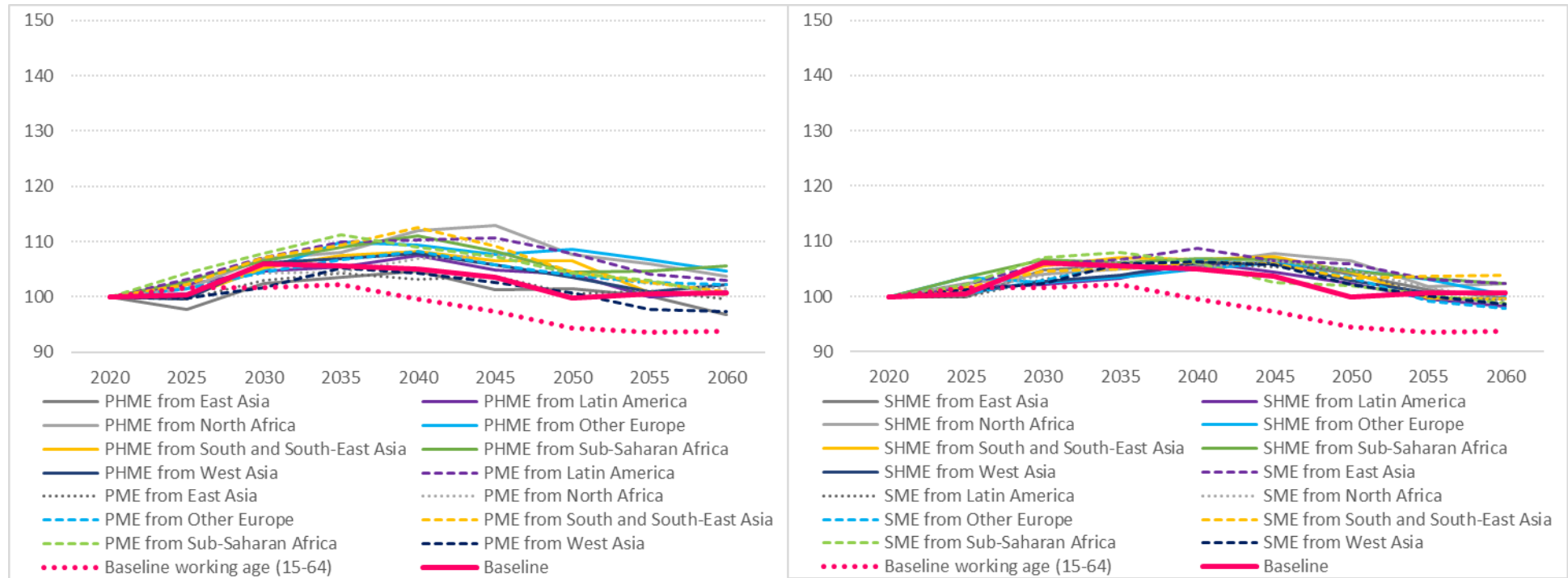


Note: \* persons can be active in the labour force between age 15 and 74

# CYPRUS

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)    Short high-migration events (SHME) and Short migration events (SME)

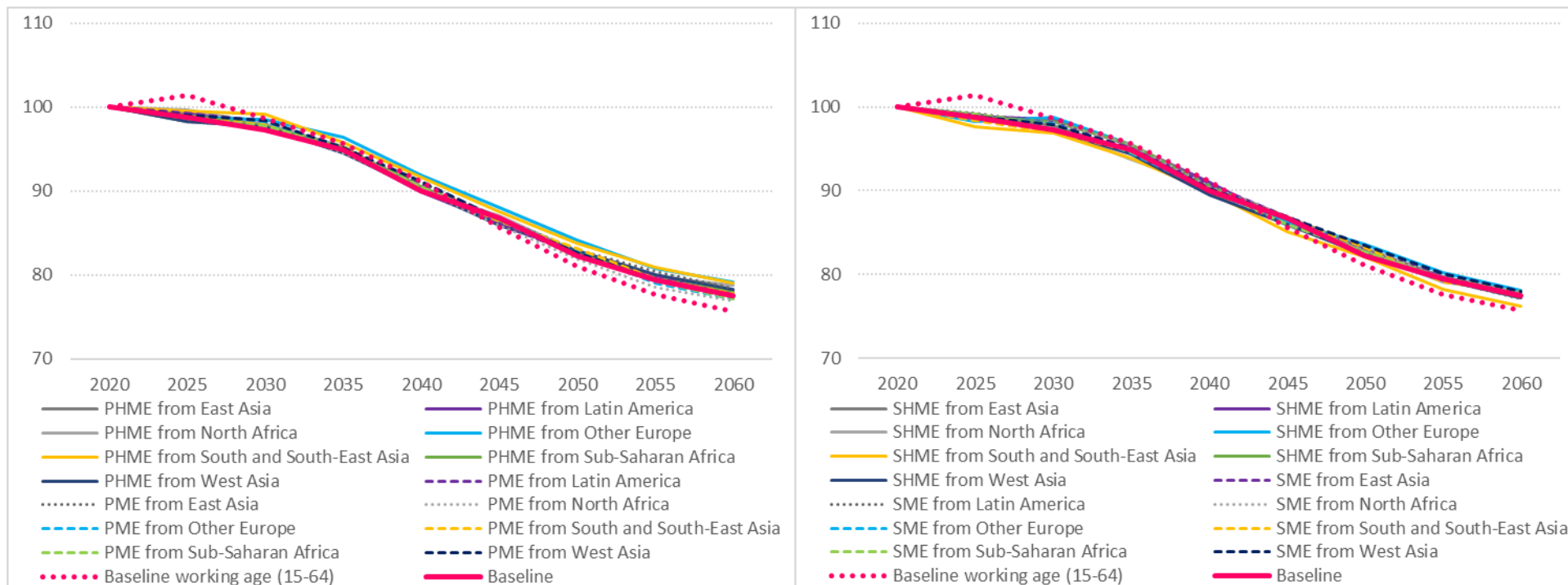


Note: \* persons can be active in the labour force between age 15 and 74

## CZECHIA

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)   Short high-migration events (SHME) and Short migration events (SME)

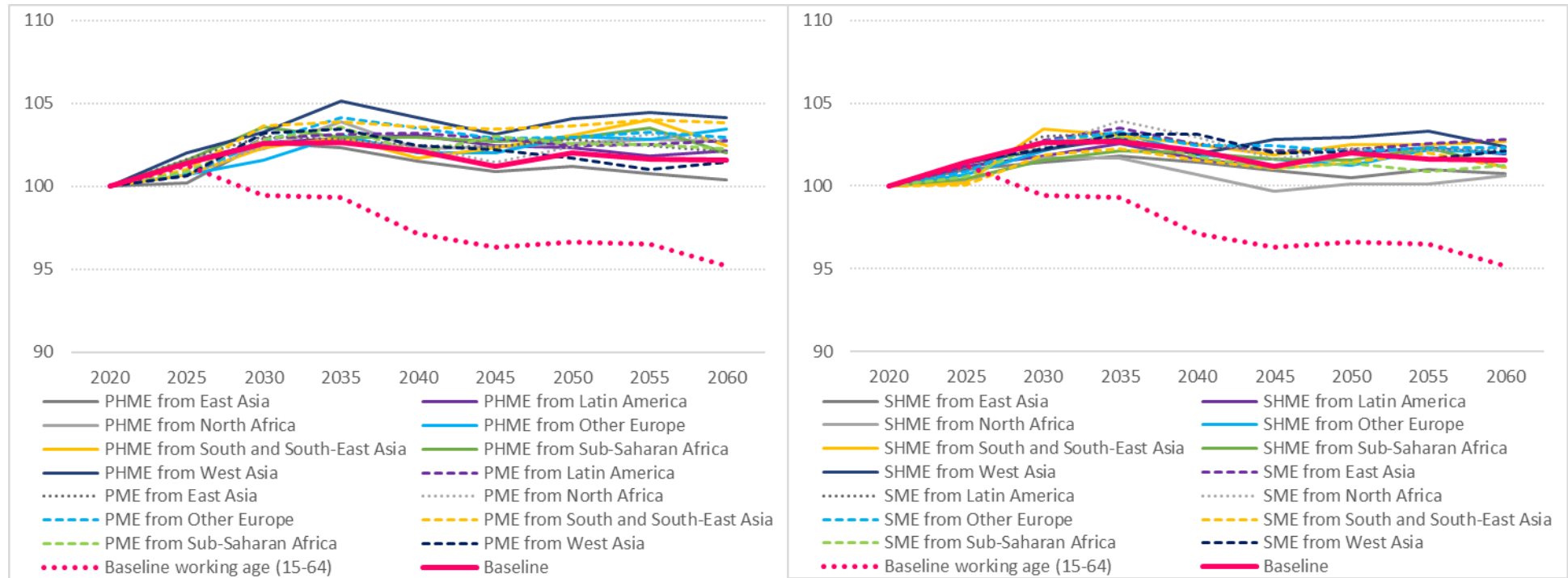


Note: \* persons can be active in the labour force between age 15 and 74

# DENMARK

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)    Short high-migration events (SHME) and Short migration events (SME)



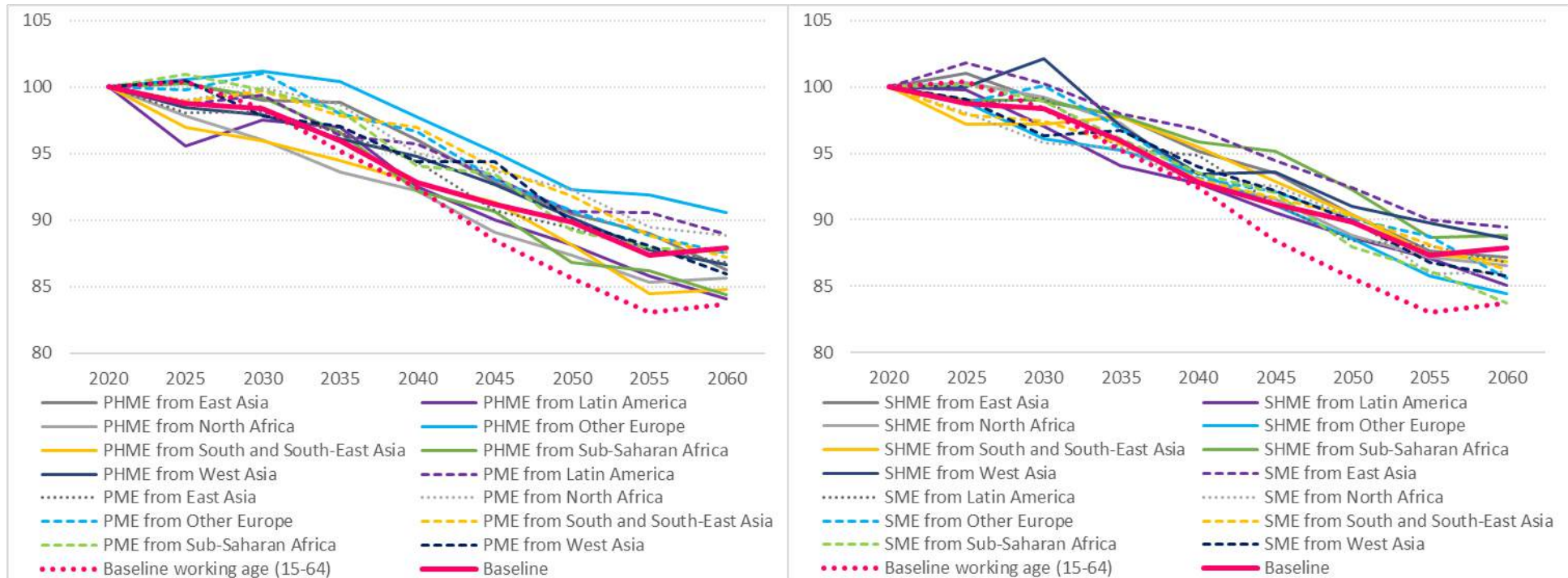
Note: \* persons can be active in the labour force between age 15 and 74



## ESTONIA

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)    Short high-migration events (SHME) and Short migration events (SME)

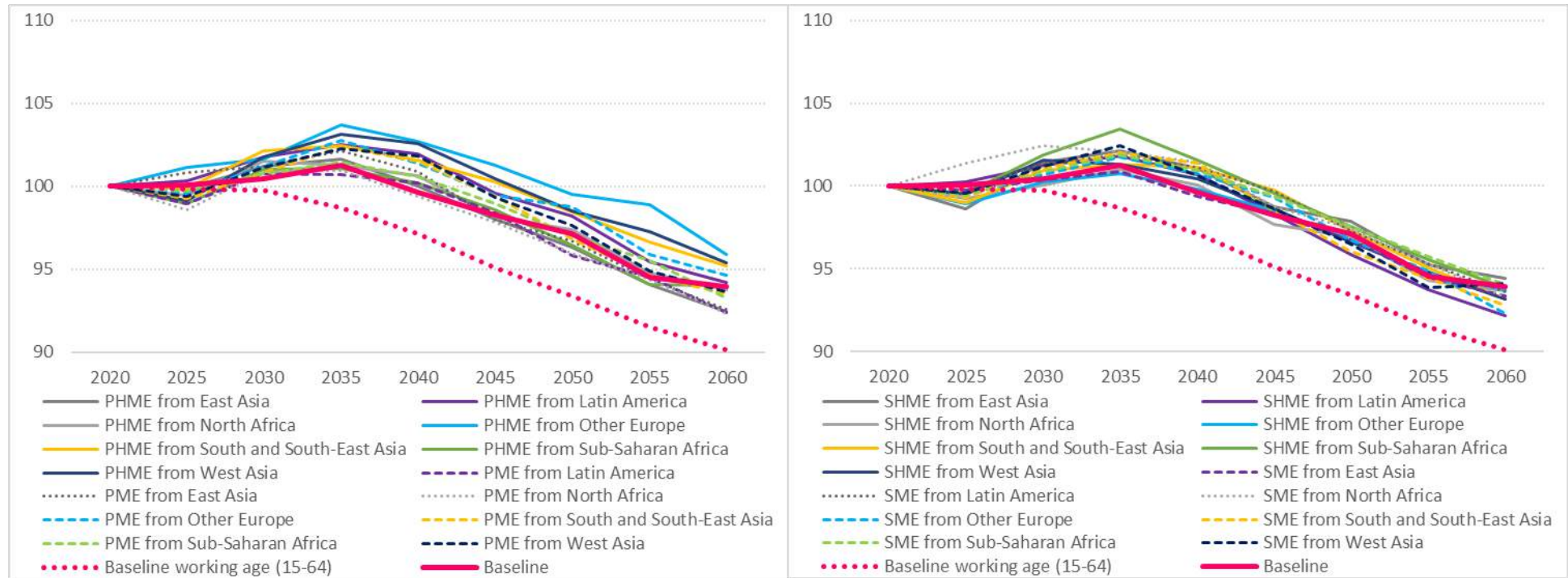


Note: \* persons can be active in the labour force between age 15 and 74

# FINLAND

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)   Short high-migration events (SHME) and Short migration events (SME)

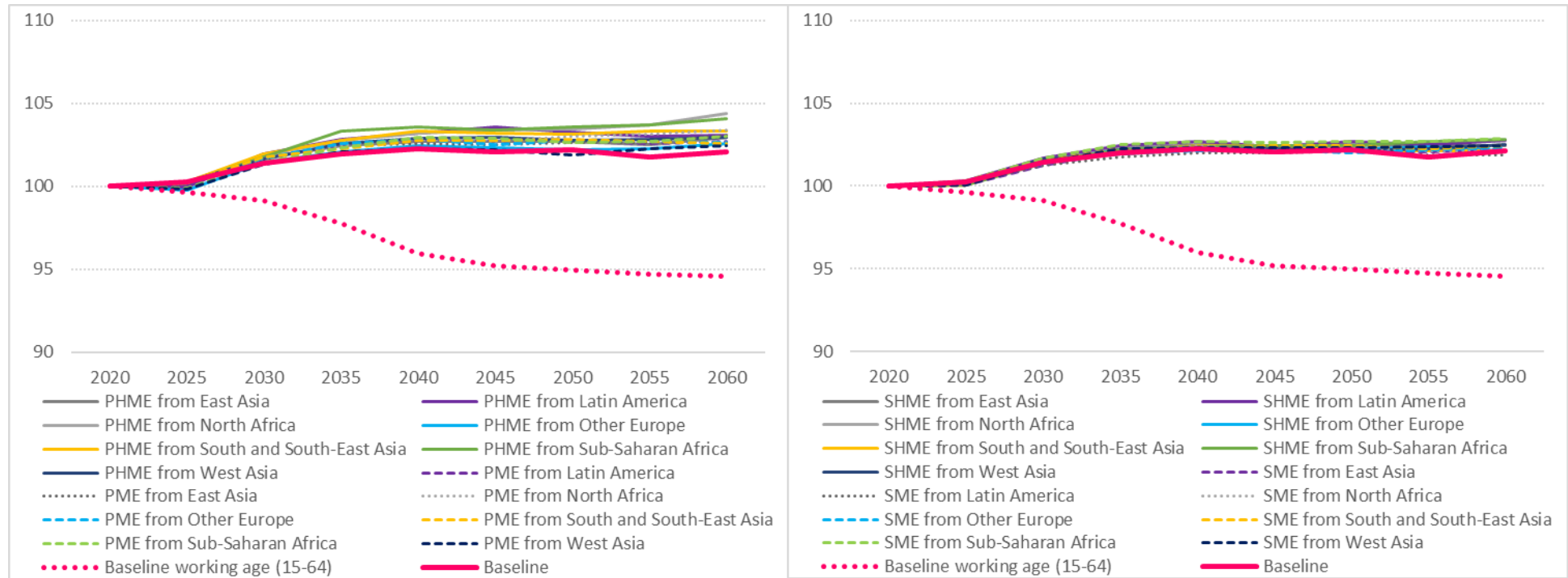


Note: \* persons can be active in the labour force between age 15 and 74

# FRANCE

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)   Short high-migration events (SHME) and Short migration events (SME)

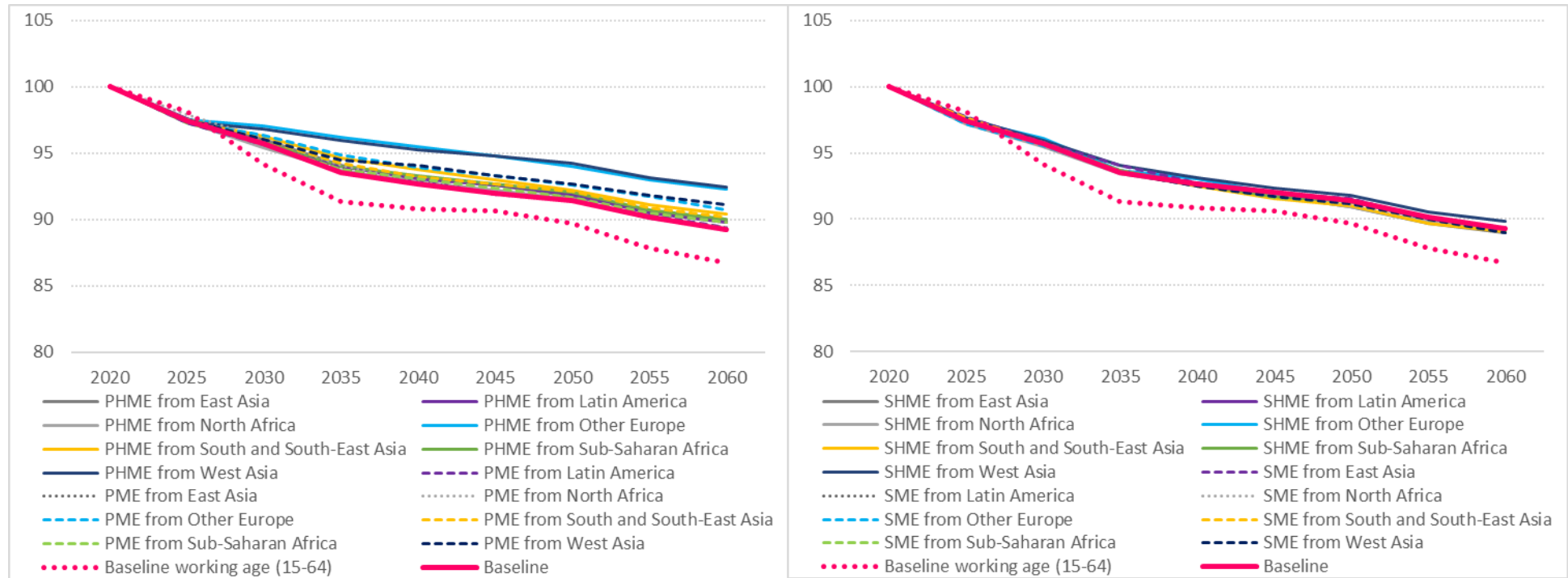


Note: \* persons can be active in the labour force between age 15 and 74

# GERMANY

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)   Short high-migration events (SHME) and Short migration events (SME)

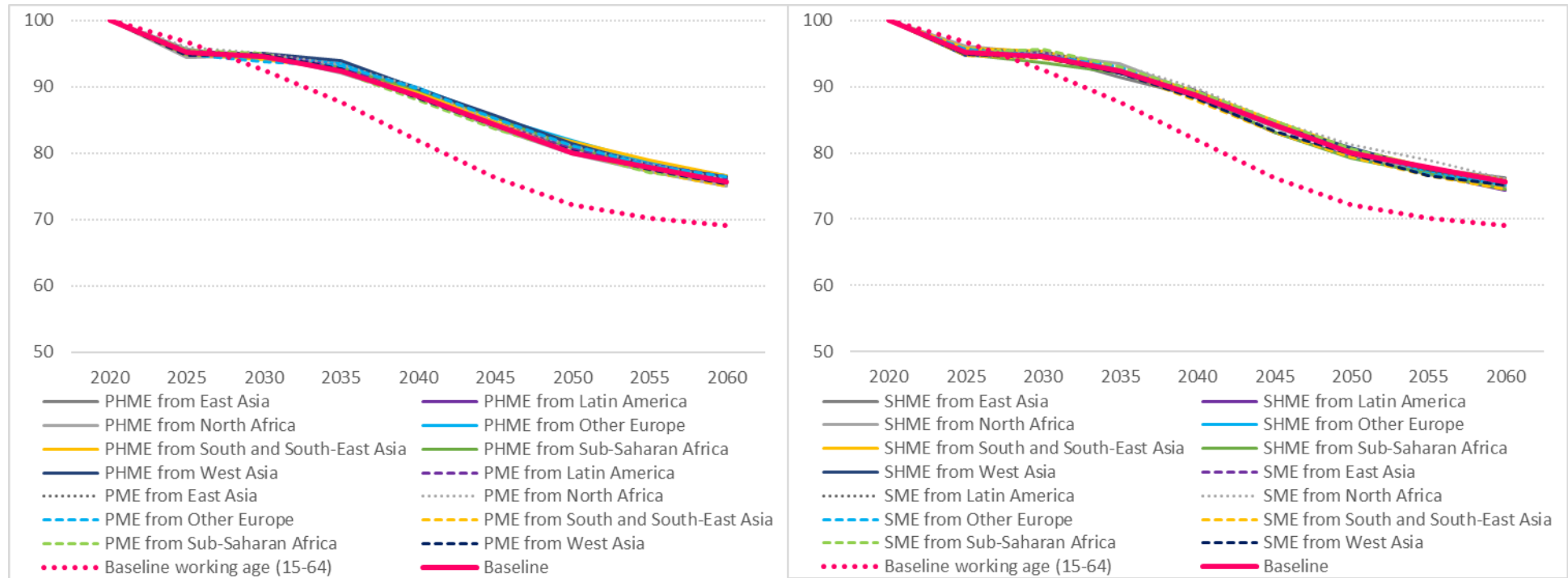


Note: \* persons can be active in the labour force between age 15 and 74

# GREECE

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)    Short high-migration events (SHME) and Short migration events (SME)

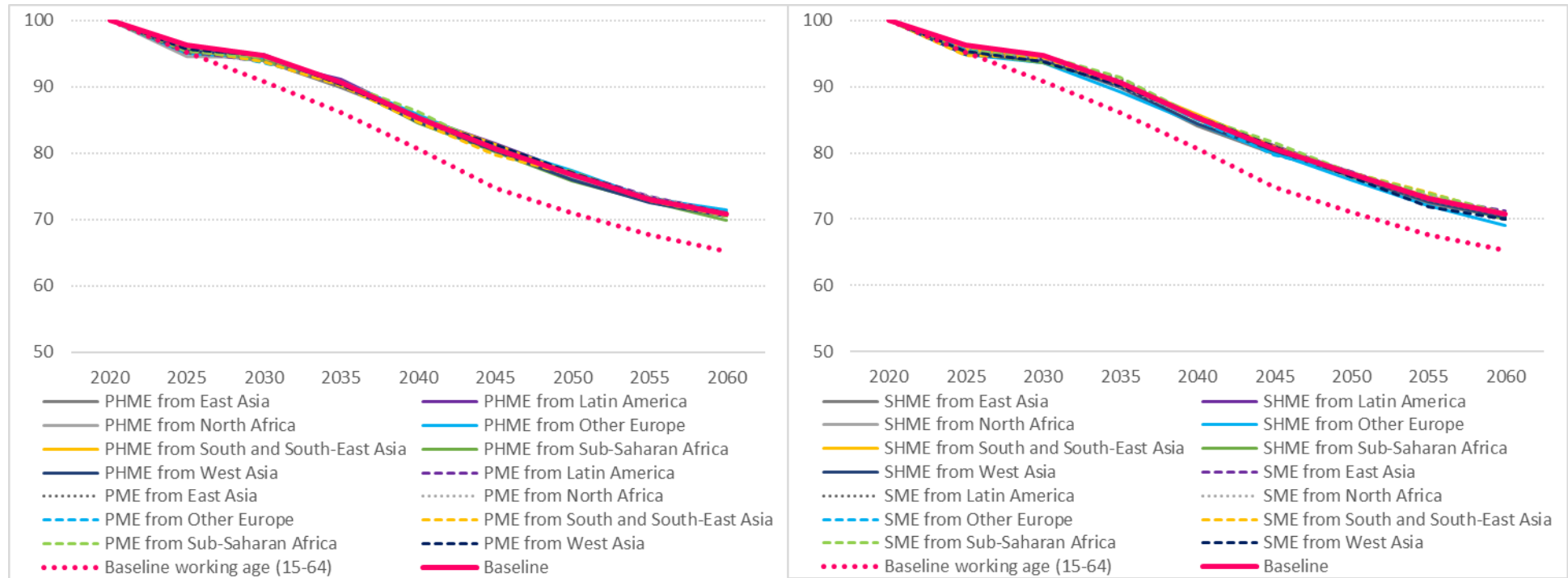


Note: \* persons can be active in the labour force between age 15 and 74

# HUNGARY

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)    Short high-migration events (SHME) and Short migration events (SME)

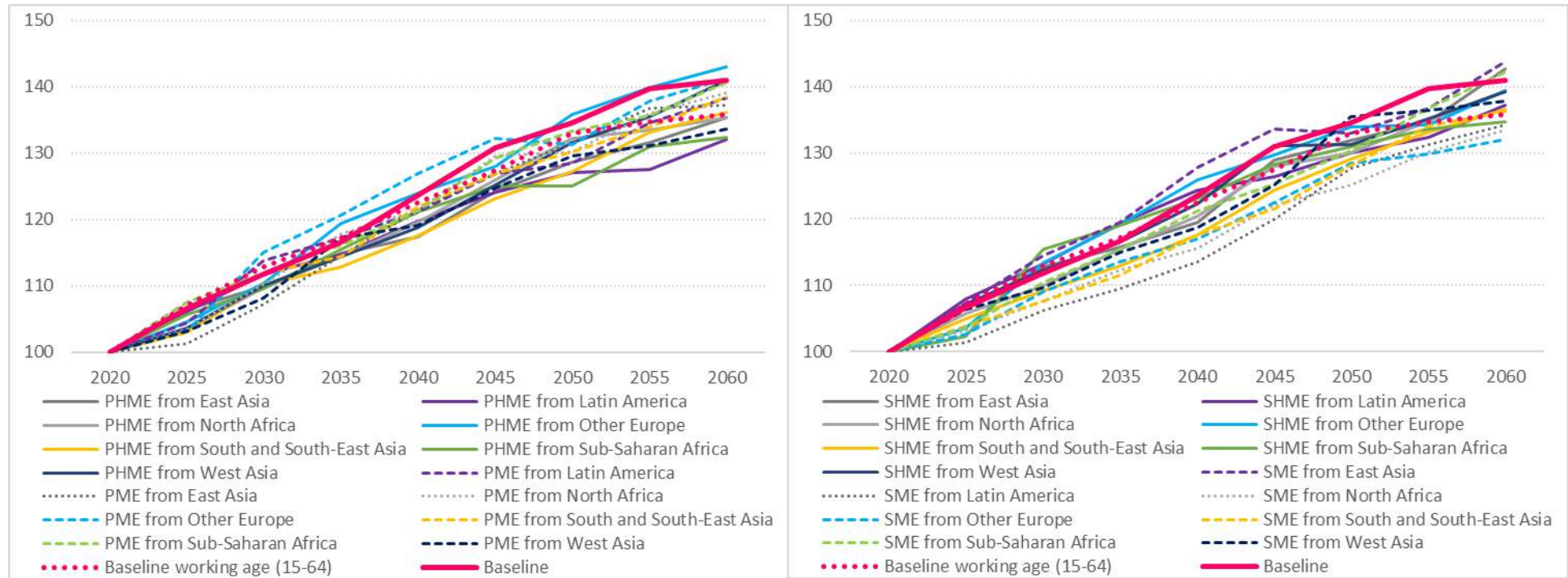


Note: \* persons can be active in the labour force between age 15 and 74

# ICELAND

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)    Short high-migration events (SHME) and Short migration events (SME)

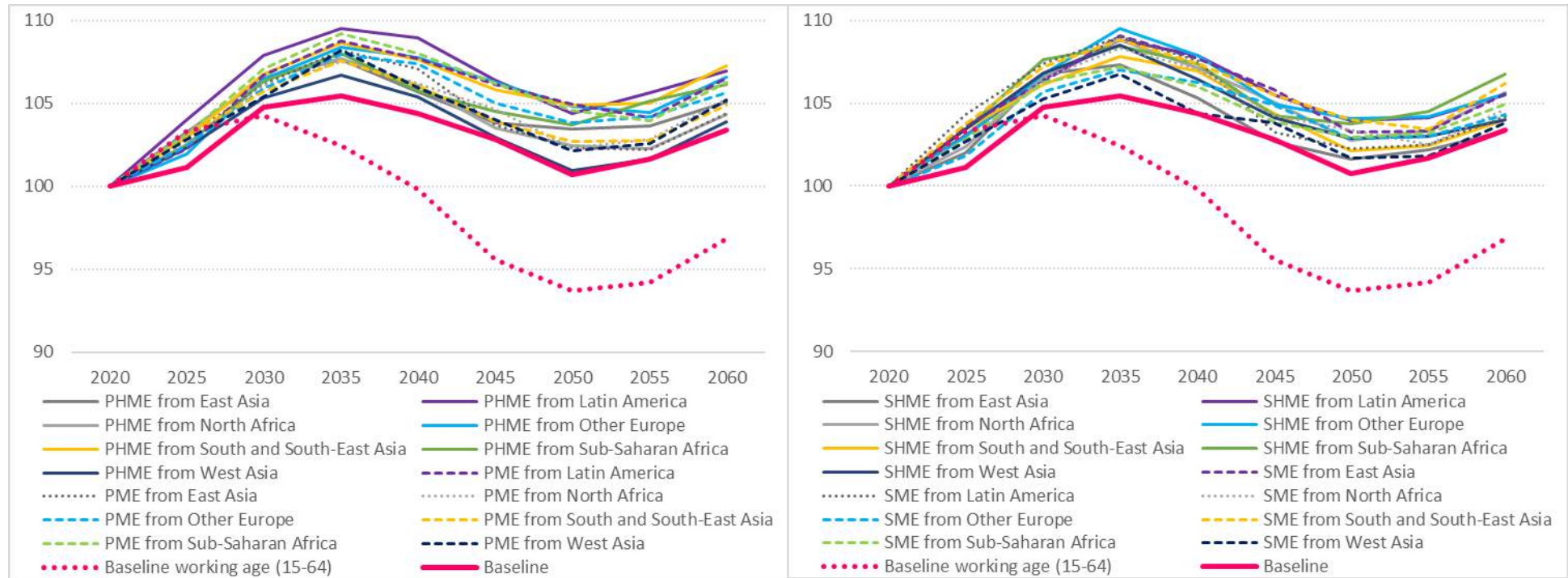


Note: \* persons can be active in the labour force between age 15 and 74

# IRELAND

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)   Short high-migration events (SHME) and Short migration events (SME)



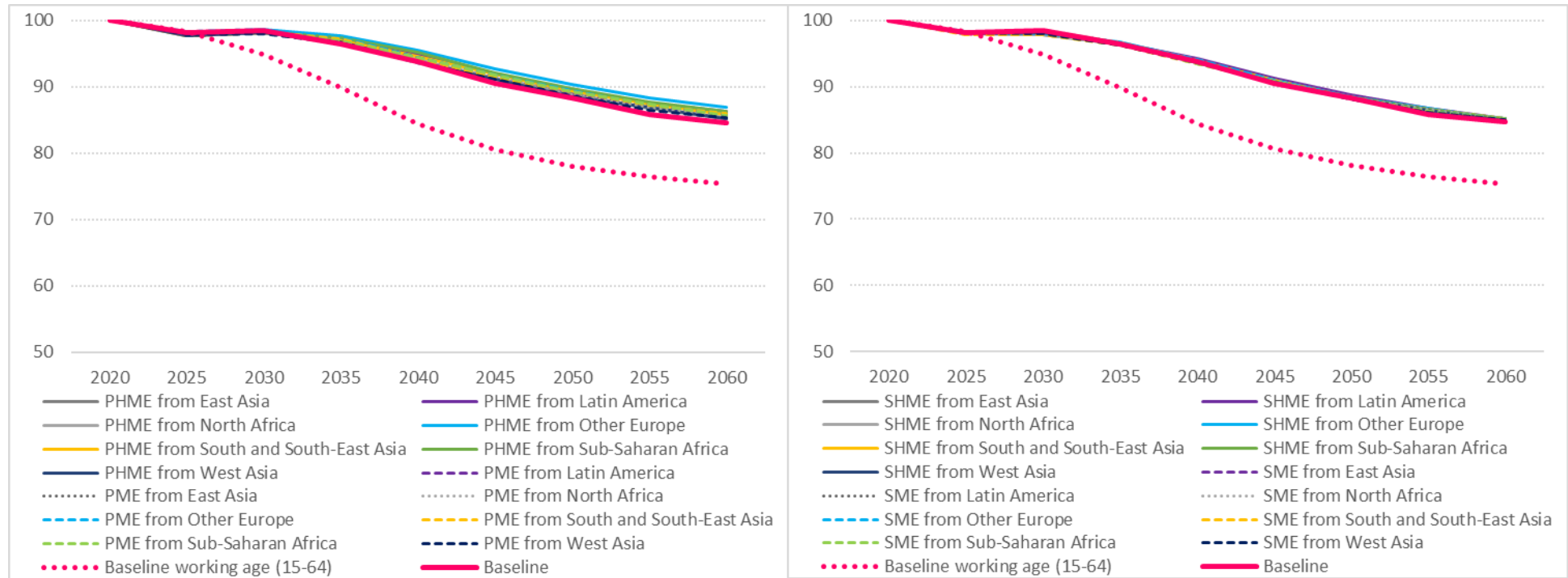
Note: \* persons can be active in the labour force between age 15 and 74



# ITALY

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)    Short high-migration events (SHME) and Short migration events (SME)

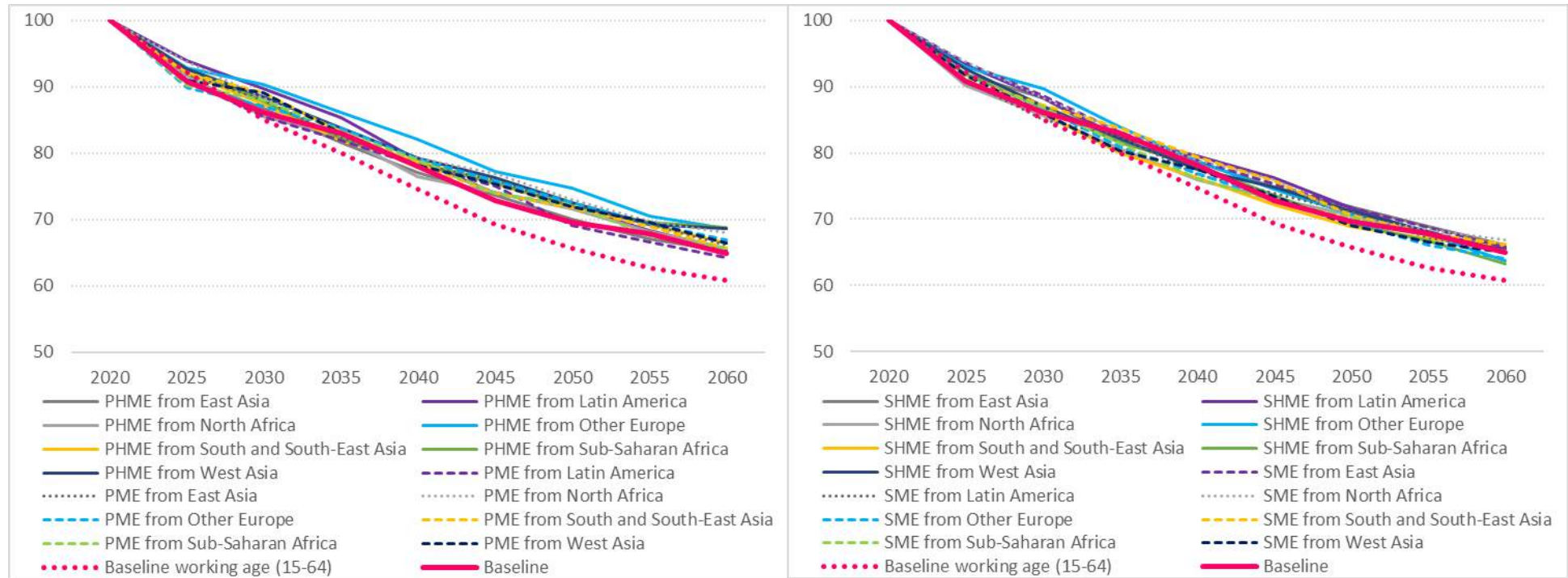


Note: \* persons can be active in the labour force between age 15 and 74

# LATVIA

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)    Short high-migration events (SHME) and Short migration events (SME)

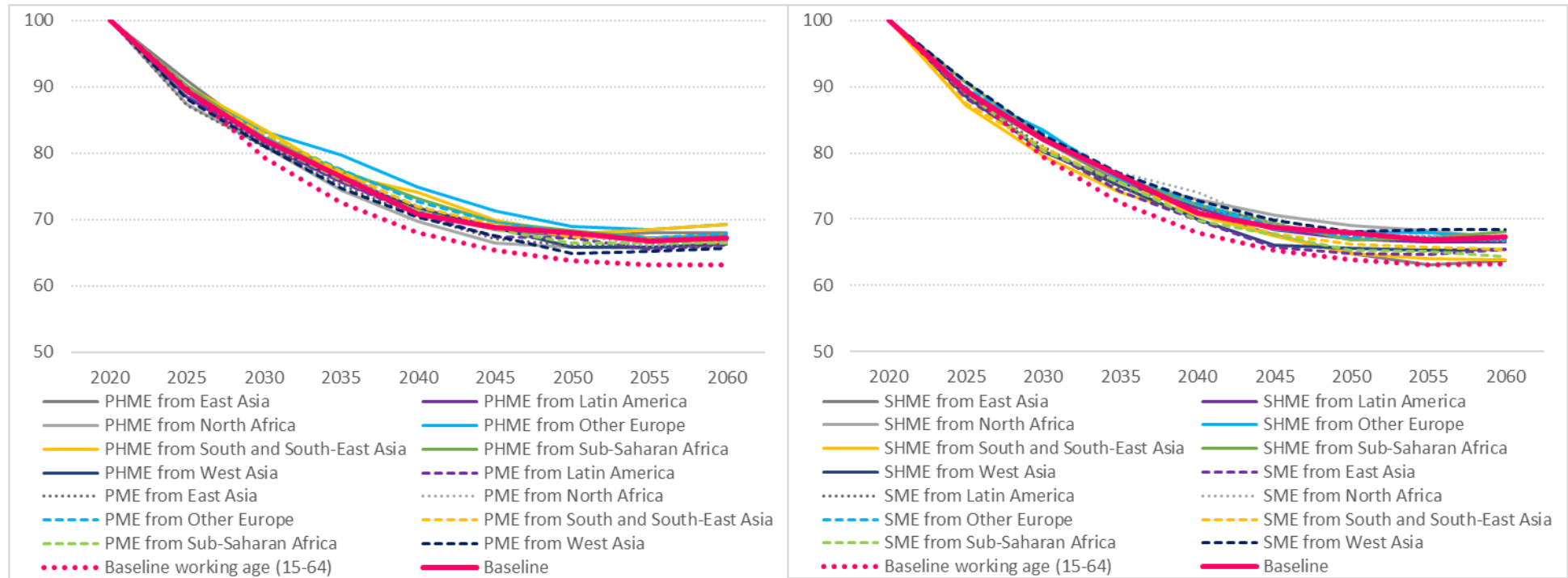


Note: \* persons can be active in the labour force between age 15 and 74

# LITHUANIA

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)   Short high-migration events (SHME) and Short migration events (SME)

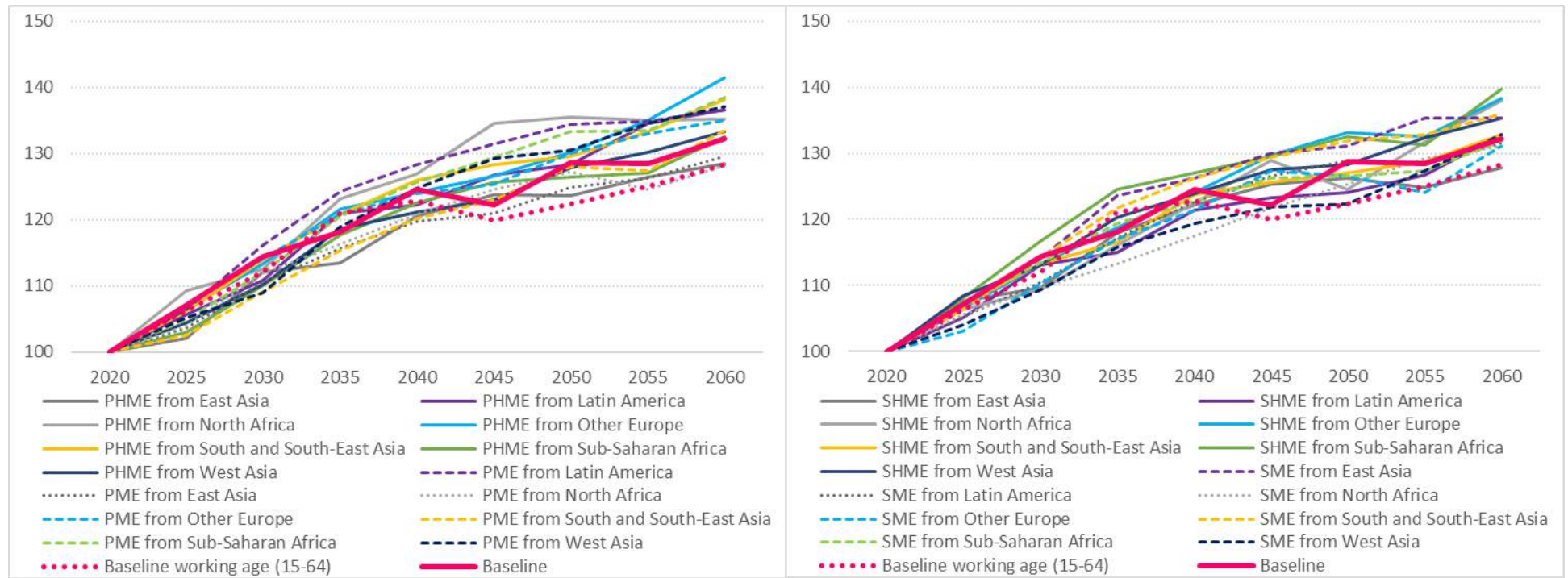


Note: \* persons can be active in the labour force between age 15 and 74

# LUXEMBURG

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)   Short high-migration events (SHME) and Short migration events (SME)

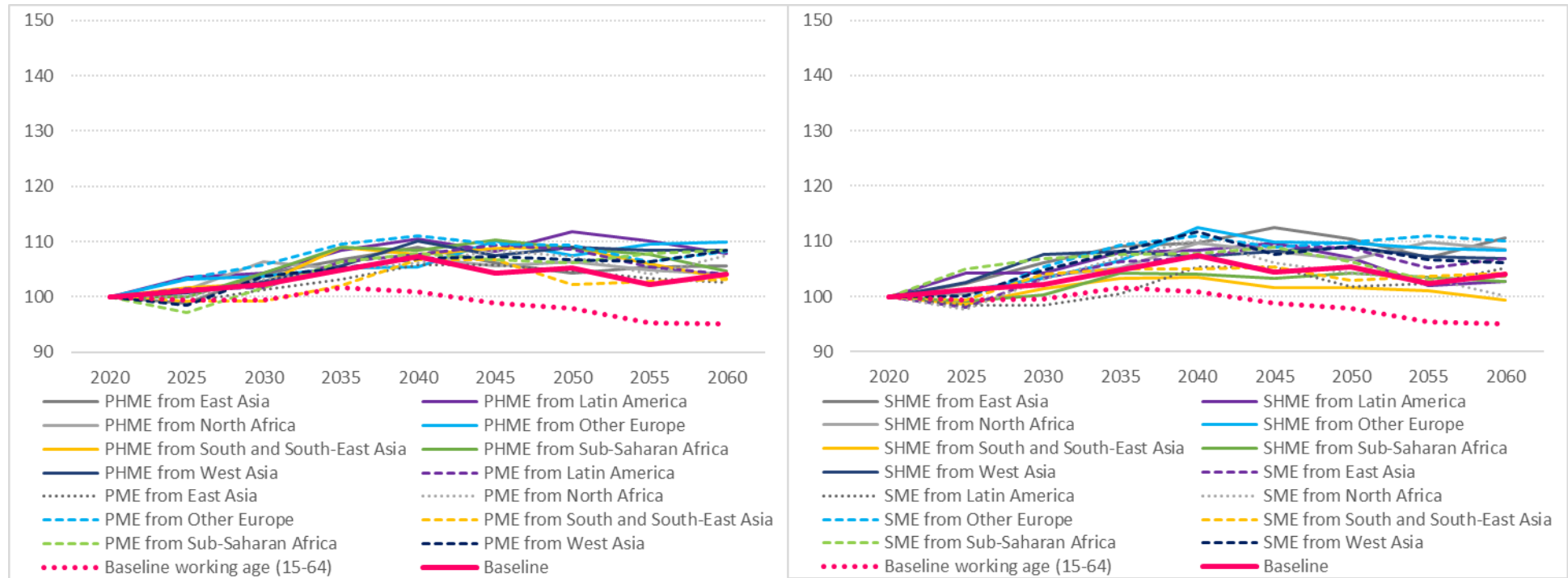


Note: \* persons can be active in the labour force between age 15 and 74

# MALTA

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)   Short high-migration events (SHME) and Short migration events (SME)

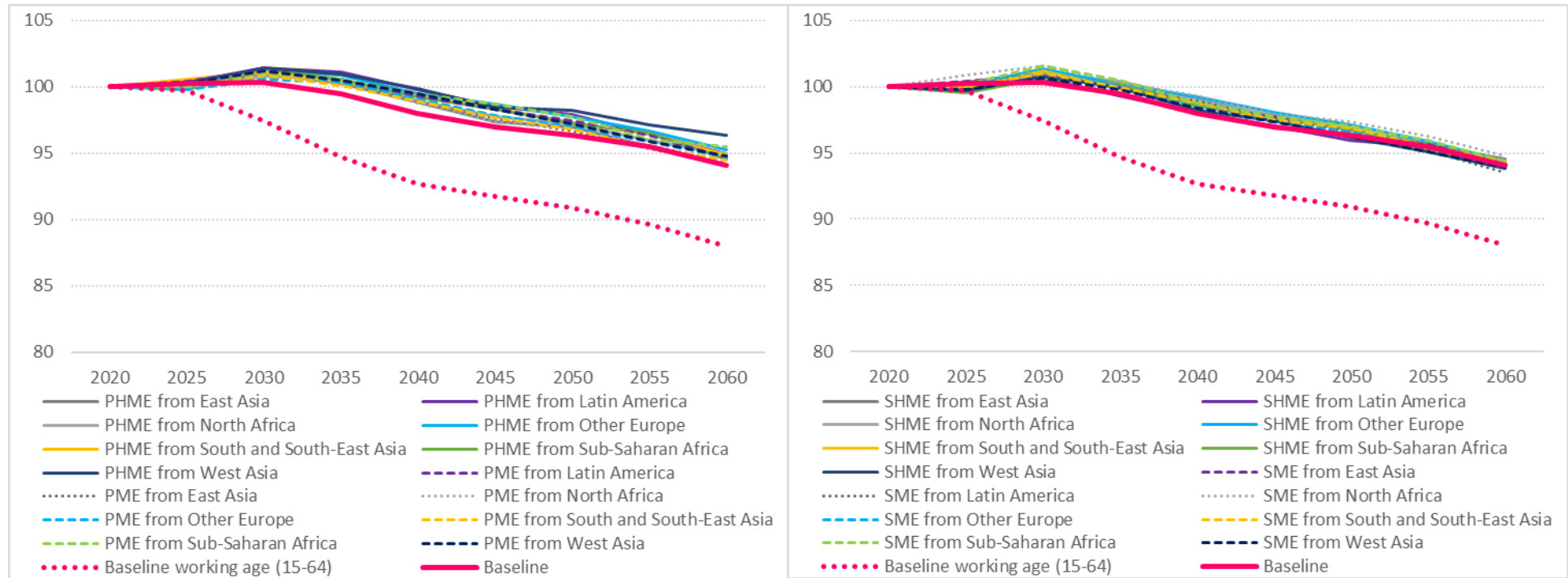


Note: \* persons can be active in the labour force between age 15 and 74

# NETHERLANDS

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)   Short high-migration events (SHME) and Short migration events (SME)

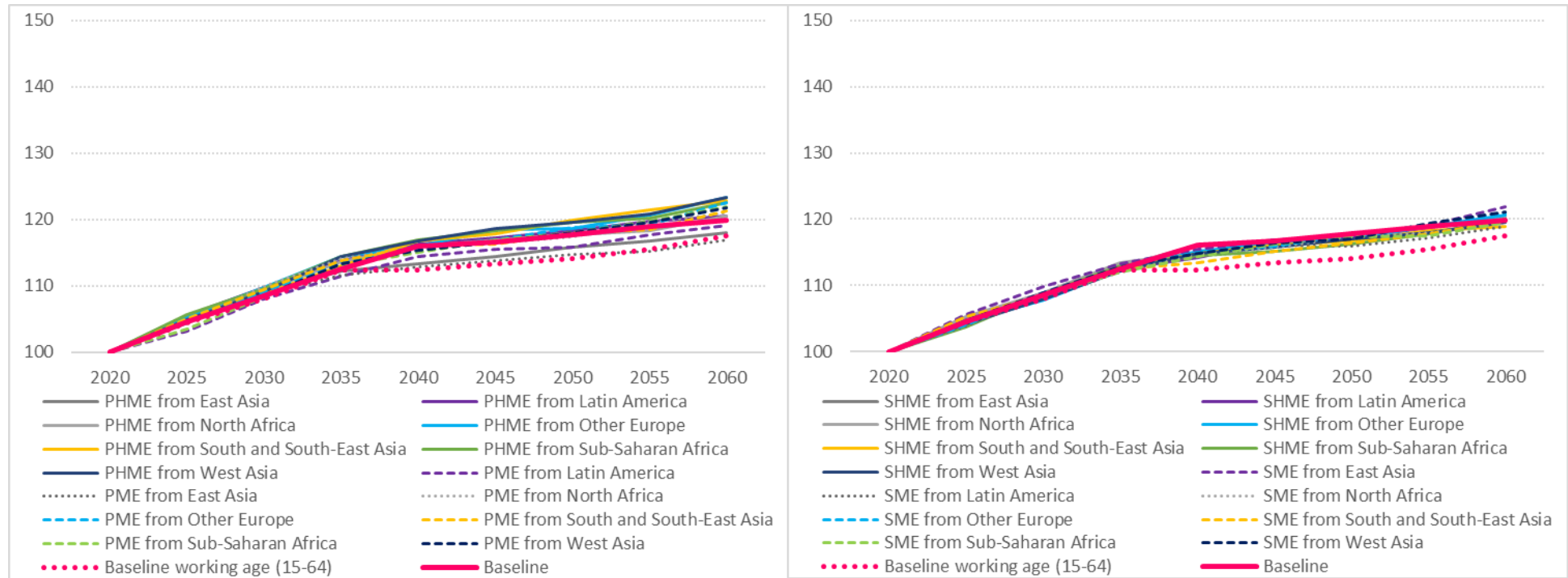


Note: \* persons can be active in the labour force between age 15 and 74

# NORWAY

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)   Short high-migration events (SHME) and Short migration events (SME)

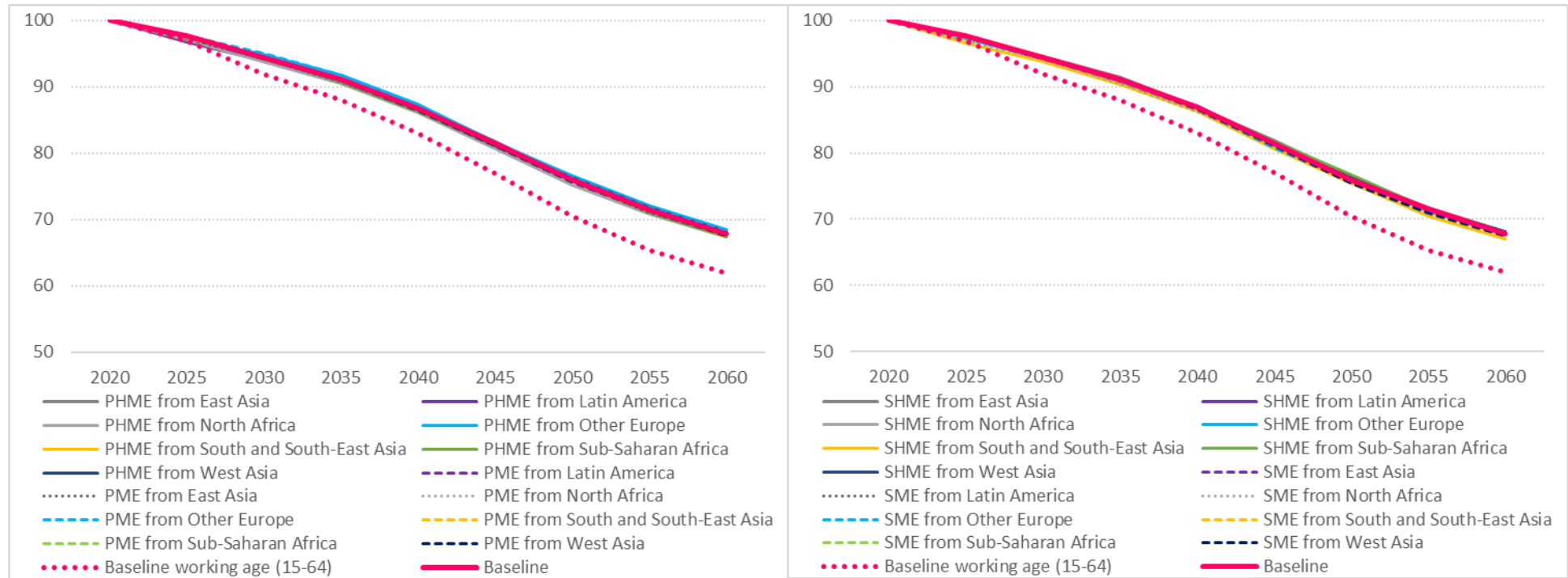


Note: \* persons can be active in the labour force between age 15 and 74

# POLAND

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)   Short high-migration events (SHME) and Short migration events (SME)



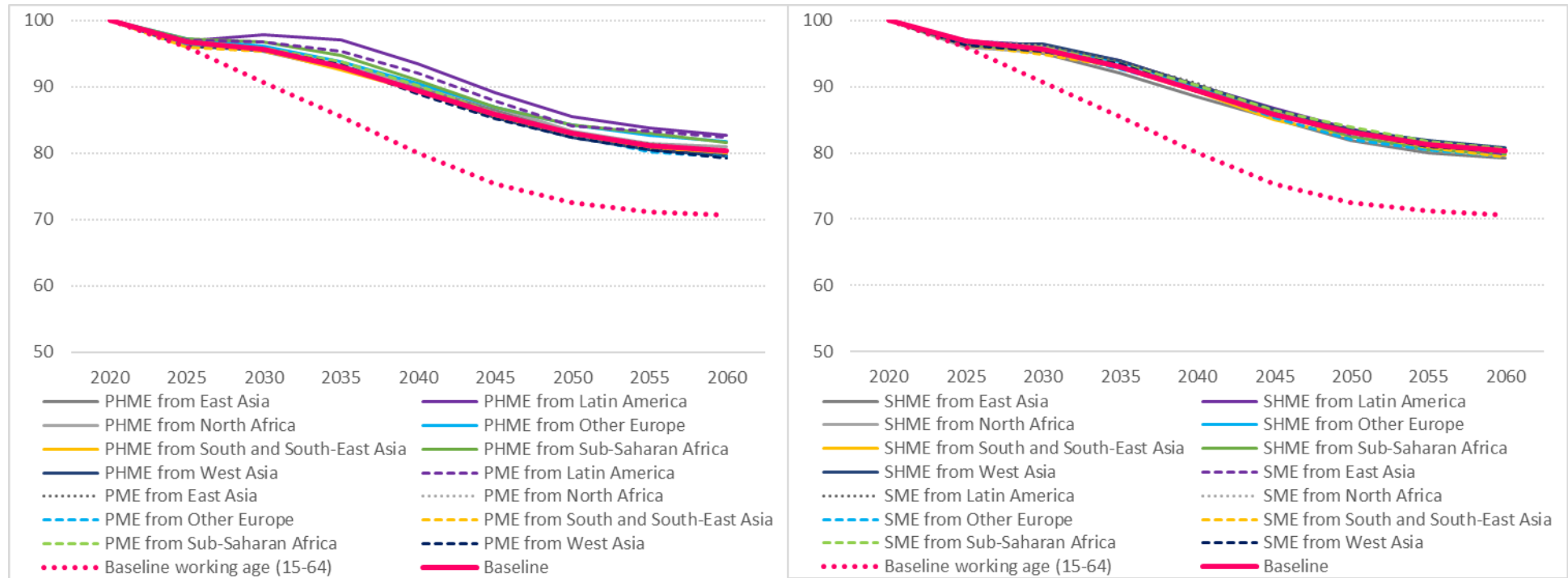
Note: \* persons can be active in the labour force between age 15 and 74



# PORTUGAL

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)   Short high-migration events (SHME) and Short migration events (SME)

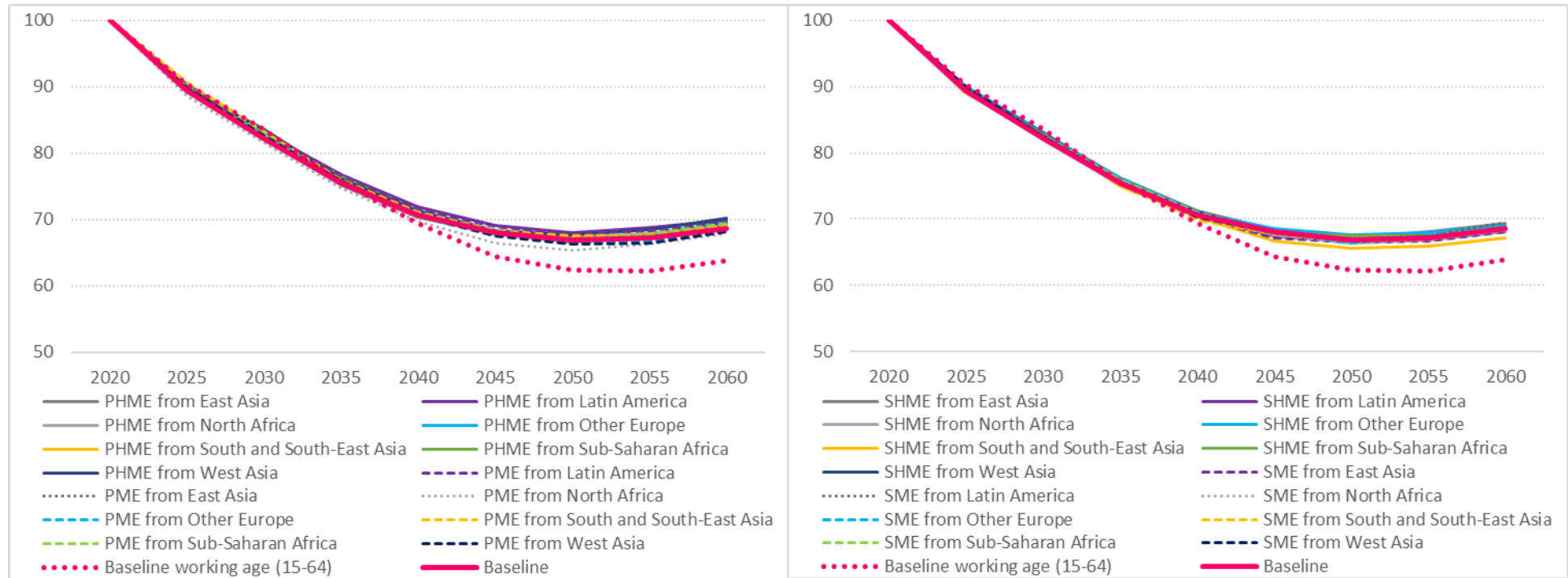


Note: \* persons can be active in the labour force between age 15 and 74

# ROMANIA

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)    Short high-migration events (SHME) and Short migration events (SME)

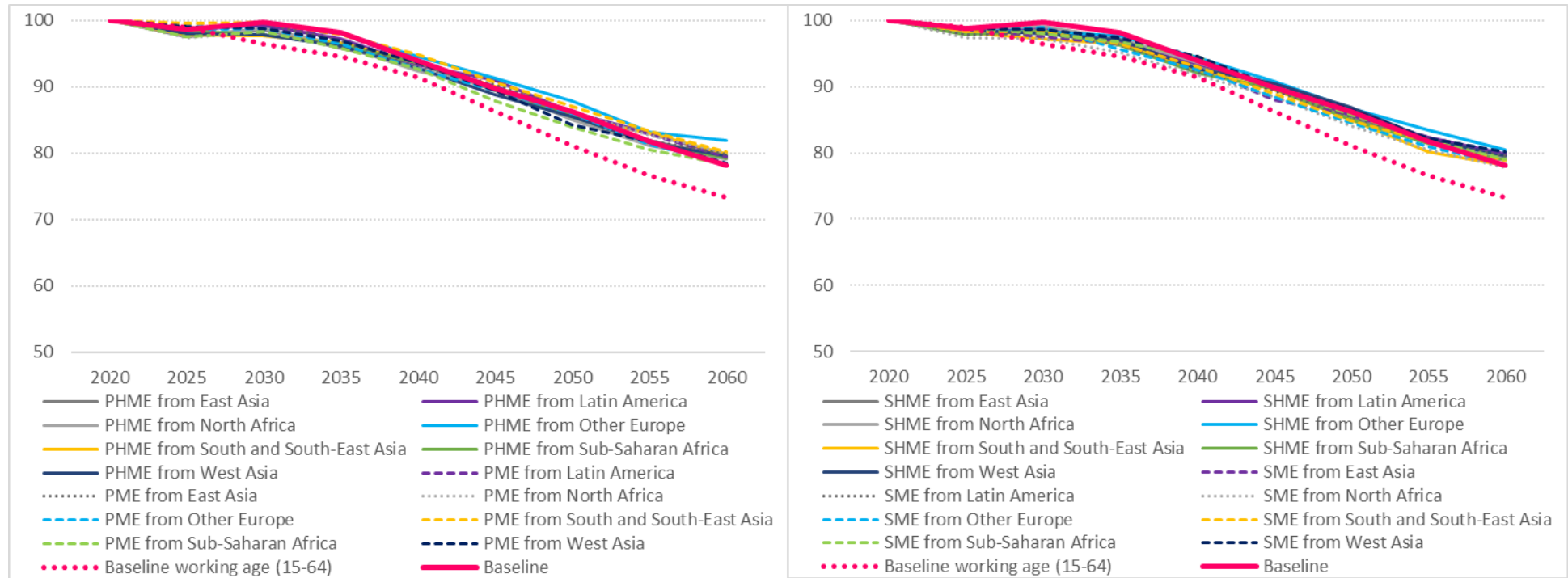


Note: \* persons can be active in the labour force between age 15 and 74

# SLOVAKIA

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)    Short high-migration events (SHME) and Short migration events (SME)

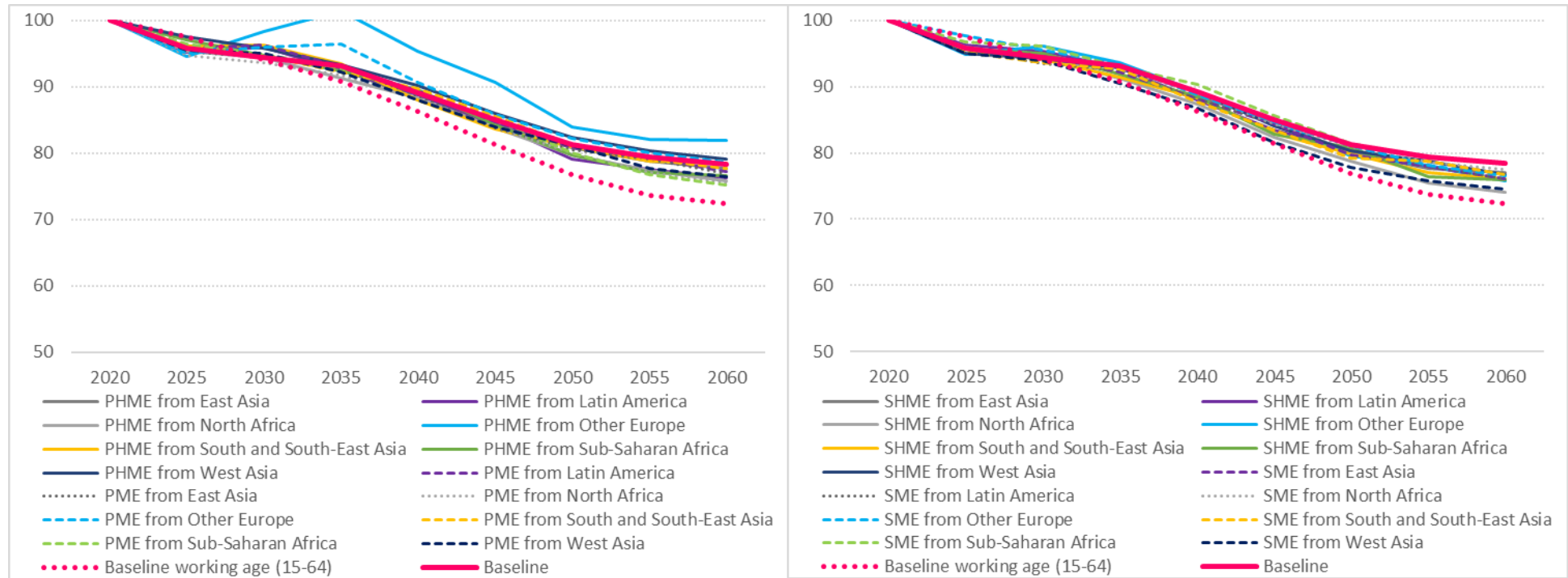


Note: \* persons can be active in the labour force between age 15 and 74

# SLOVENIA

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)    Short high-migration events (SHME) and Short migration events (SME)

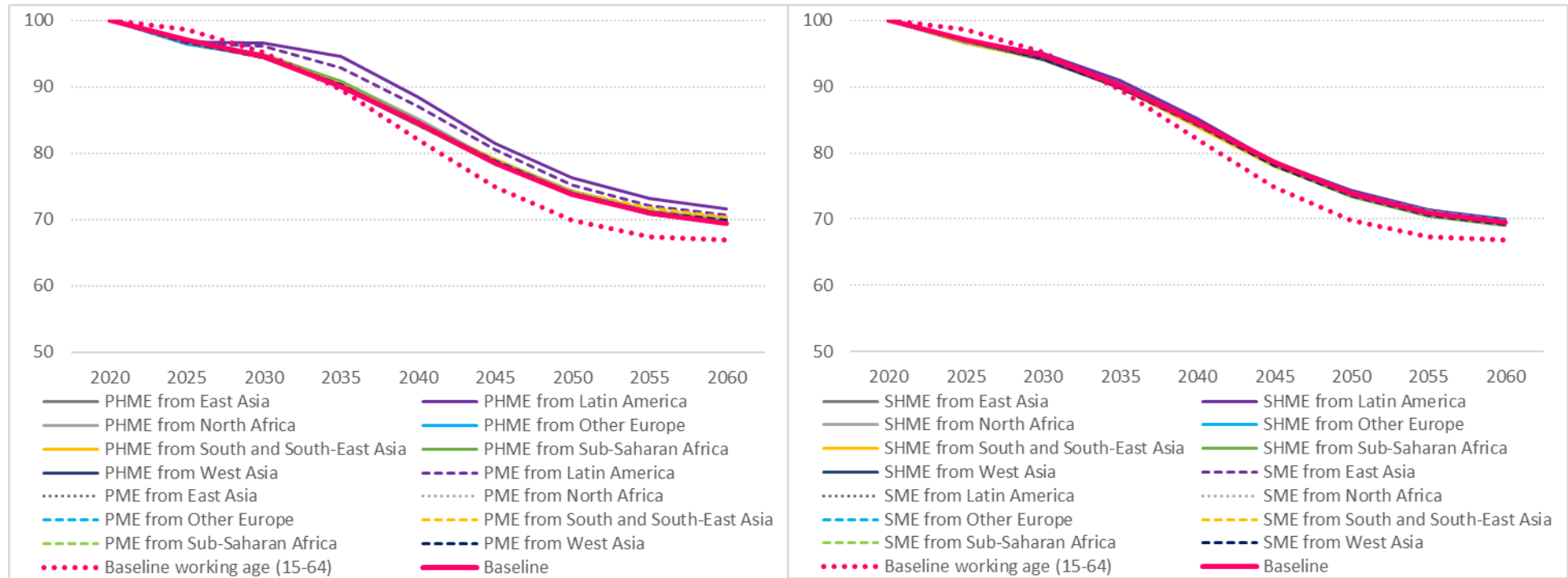


Note: \* persons can be active in the labour force between age 15 and 74

# SPAIN

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)   Short high-migration events (SHME) and Short migration events (SME)

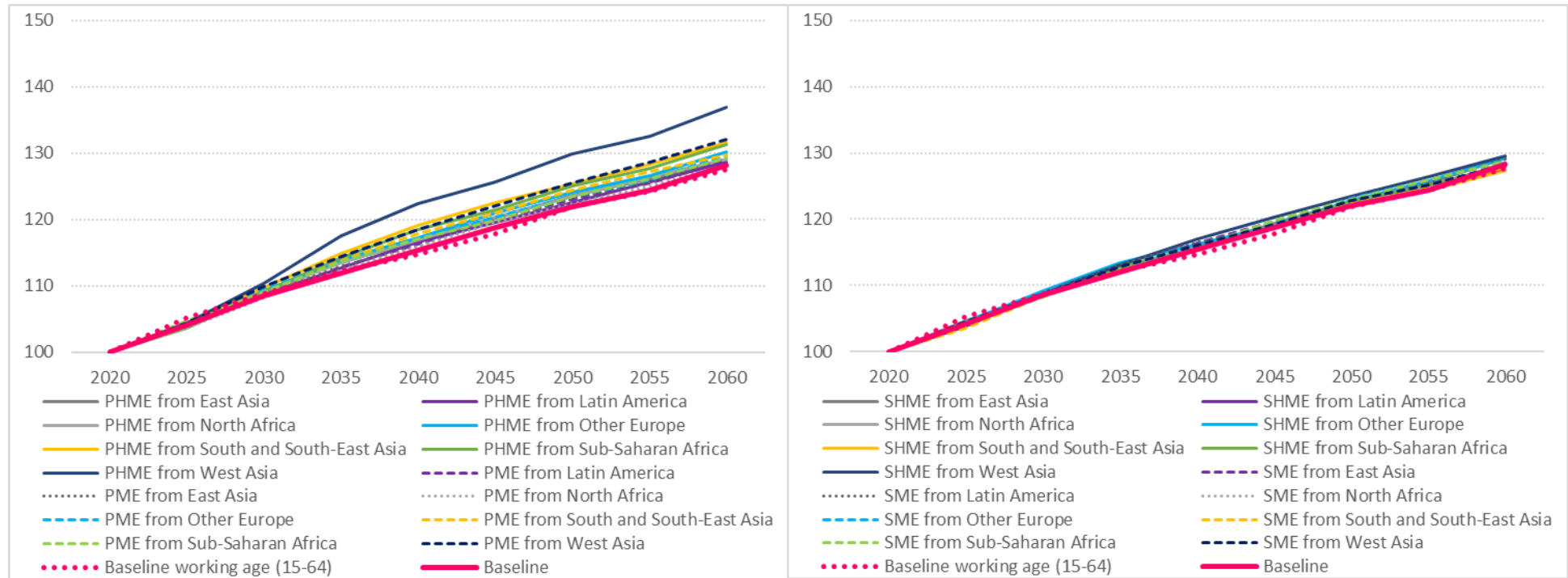


Note: \* persons can be active in the labour force between age 15 and 74

# SWEDEN

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)    Short high-migration events (SHME) and Short migration events (SME)

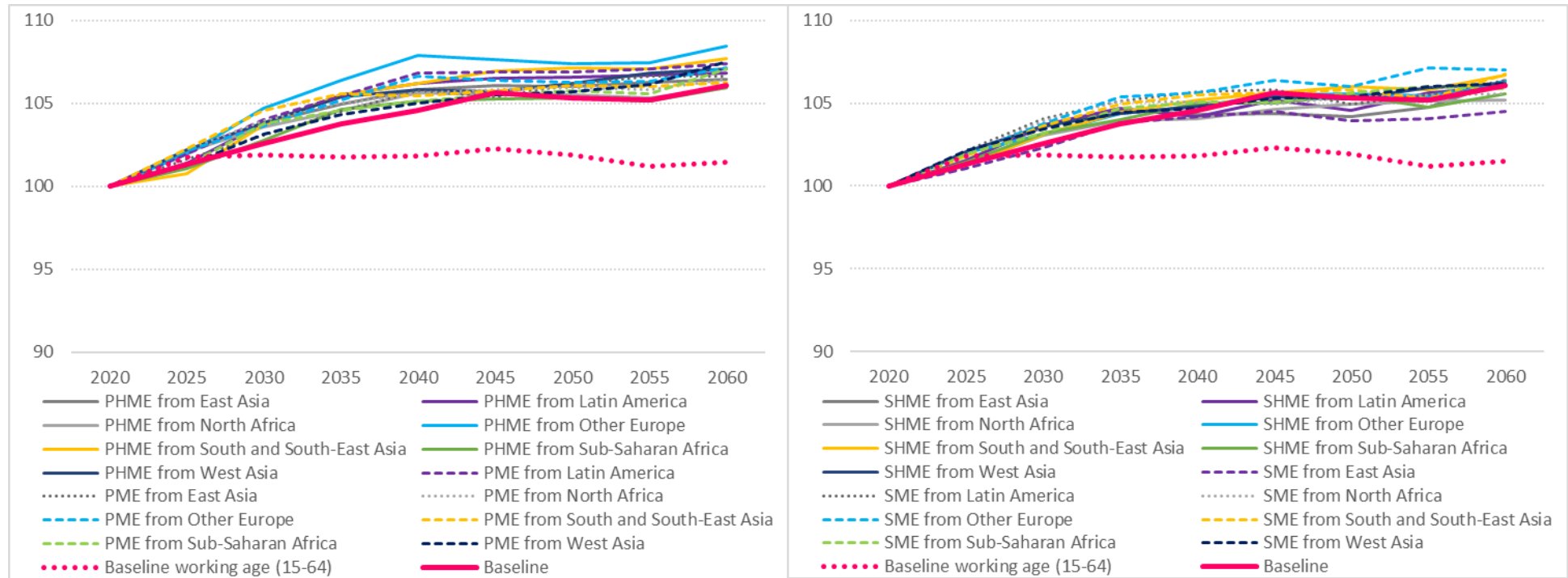


Note: \* persons can be active in the labour force between age 15 and 74

# SWITZERLAND

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

Persistent high-migration events (PHME) and Persistent migration events (PME)    Short high-migration events (SHME) and Short migration events (SME)

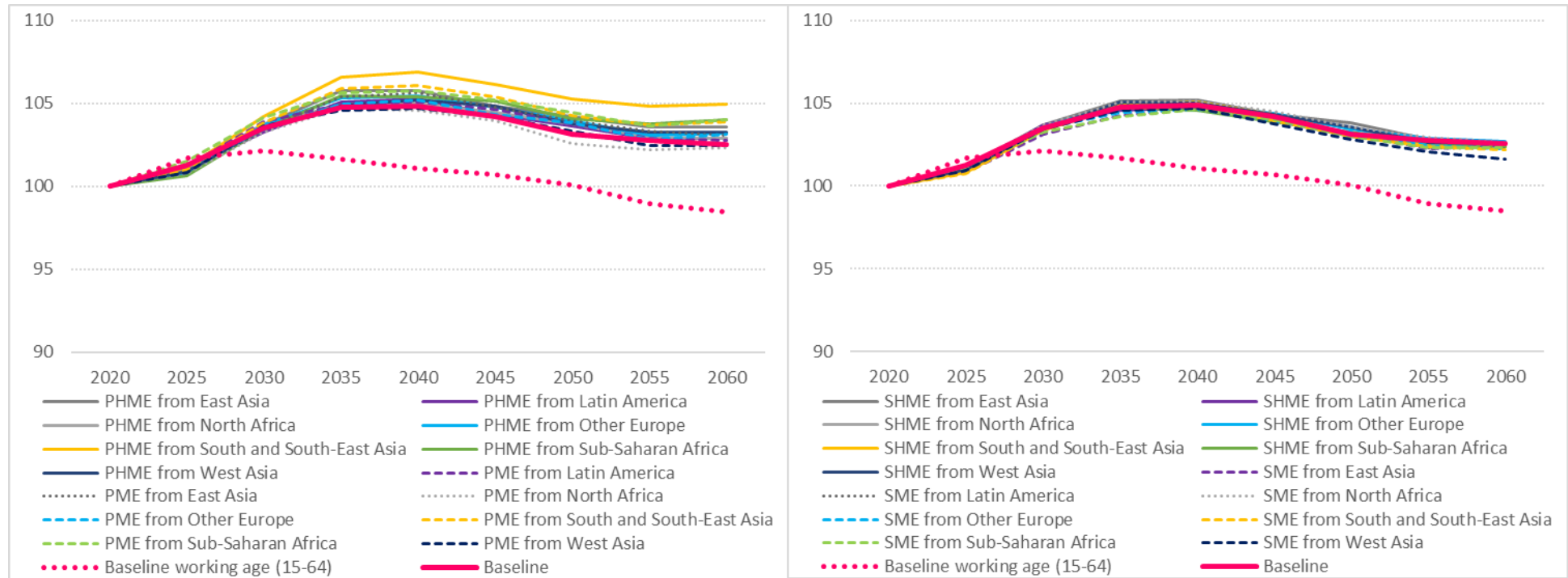


Note: \* persons can be active in the labour force between age 15 and 74

# UNITED KINGDOM

Relative change in total labour force\* in all scenarios and in working age population (15-64) in the baseline (2020 = 100)

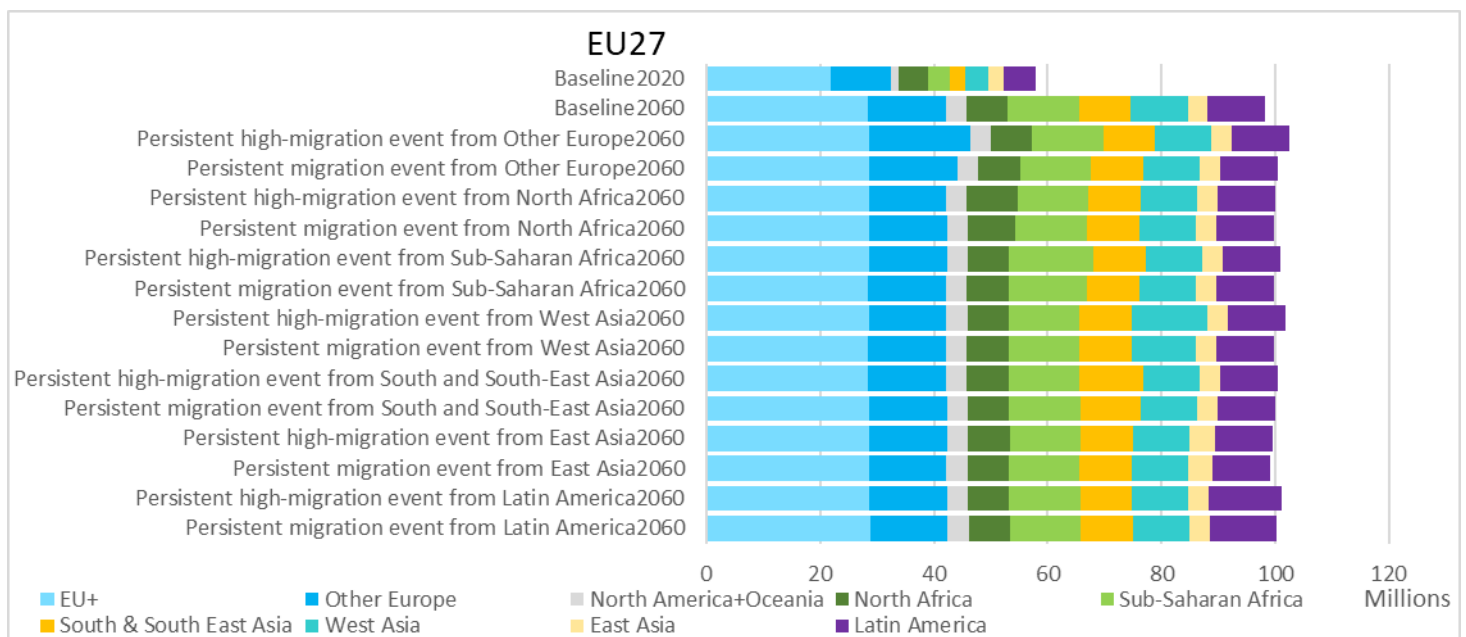
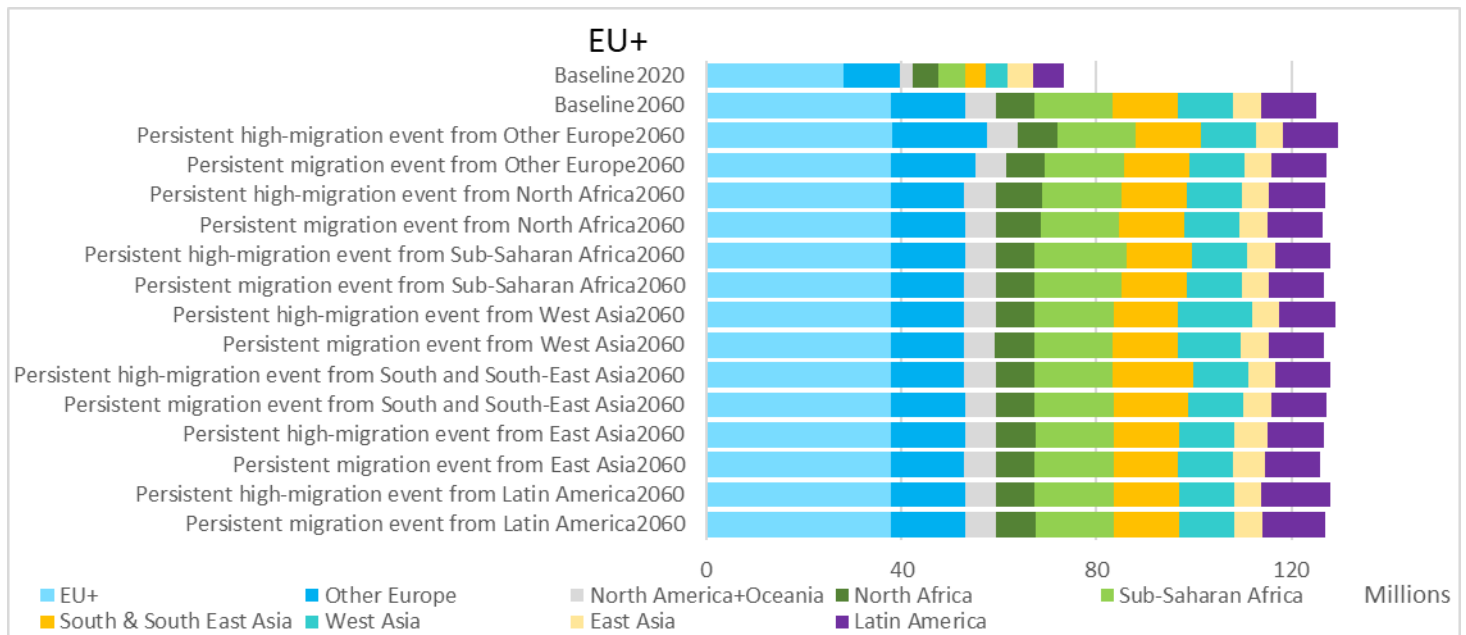
Persistent high-migration events (PHME) and Persistent migration events (PME)   Short high-migration events (SHME) and Short migration events (SME)



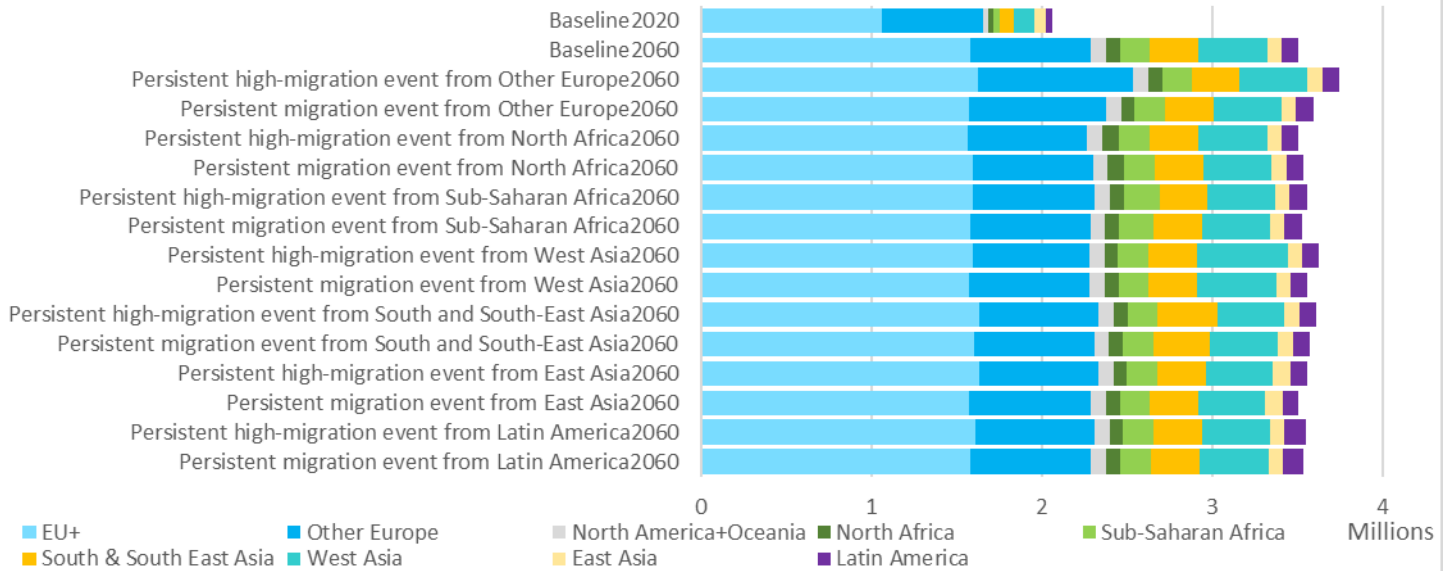
Note: \* persons can be active in the labour force between age 15 and 74



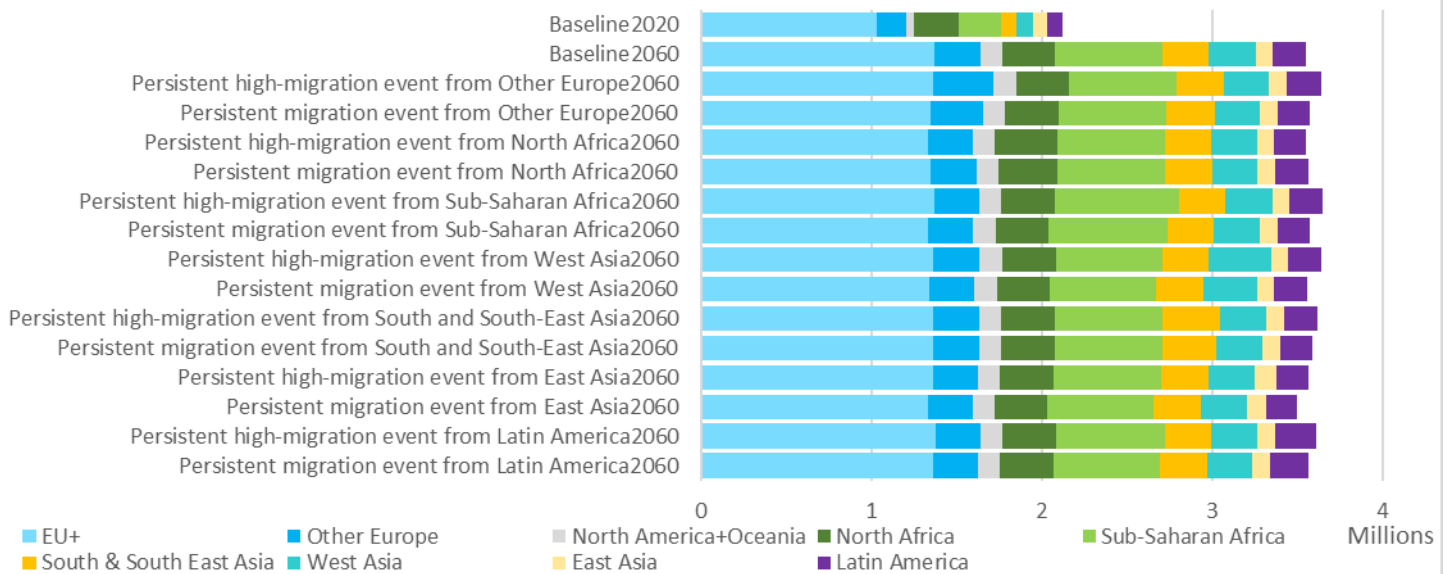
**Figure B.3 Composition of foreign-born populations in selected countries in 2020 and in 2060 in Baseline and Persistent high-migration events scenarios**



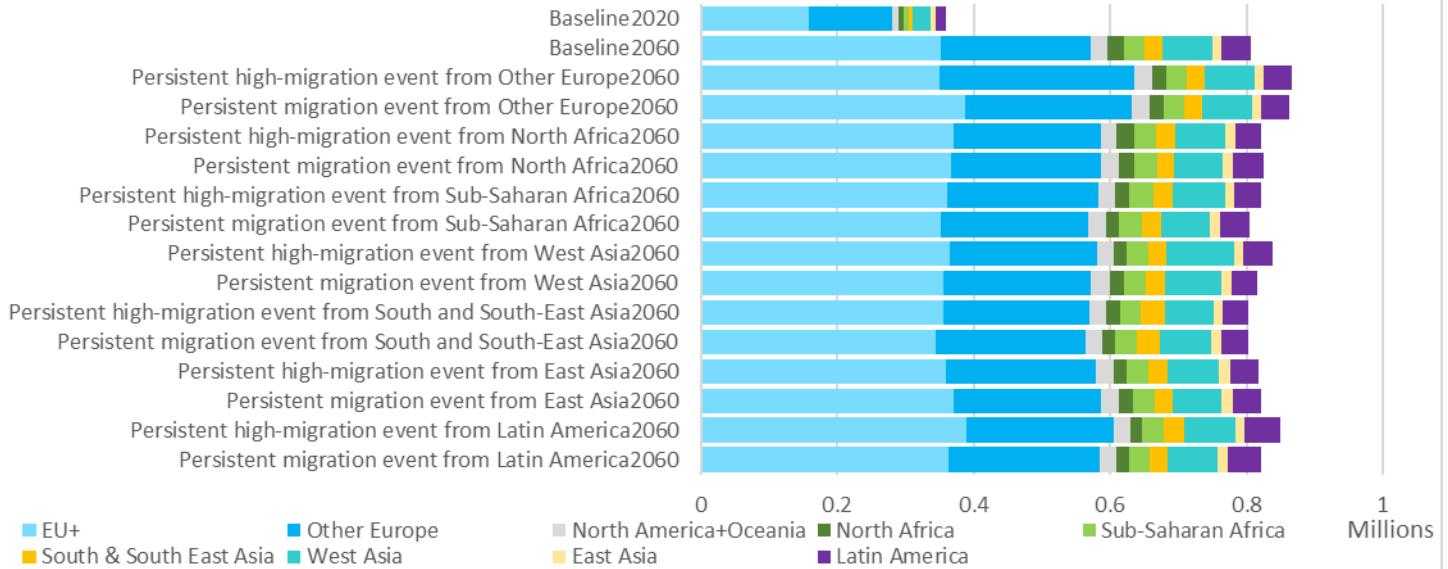
### Austria



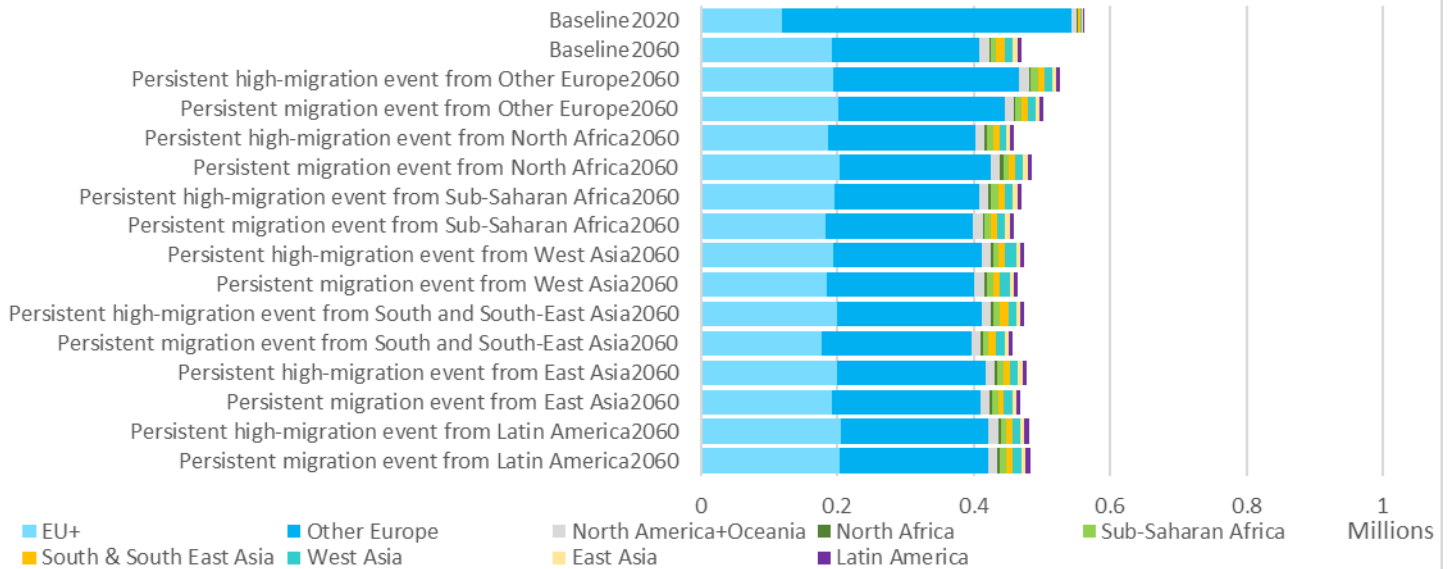
### Belgium



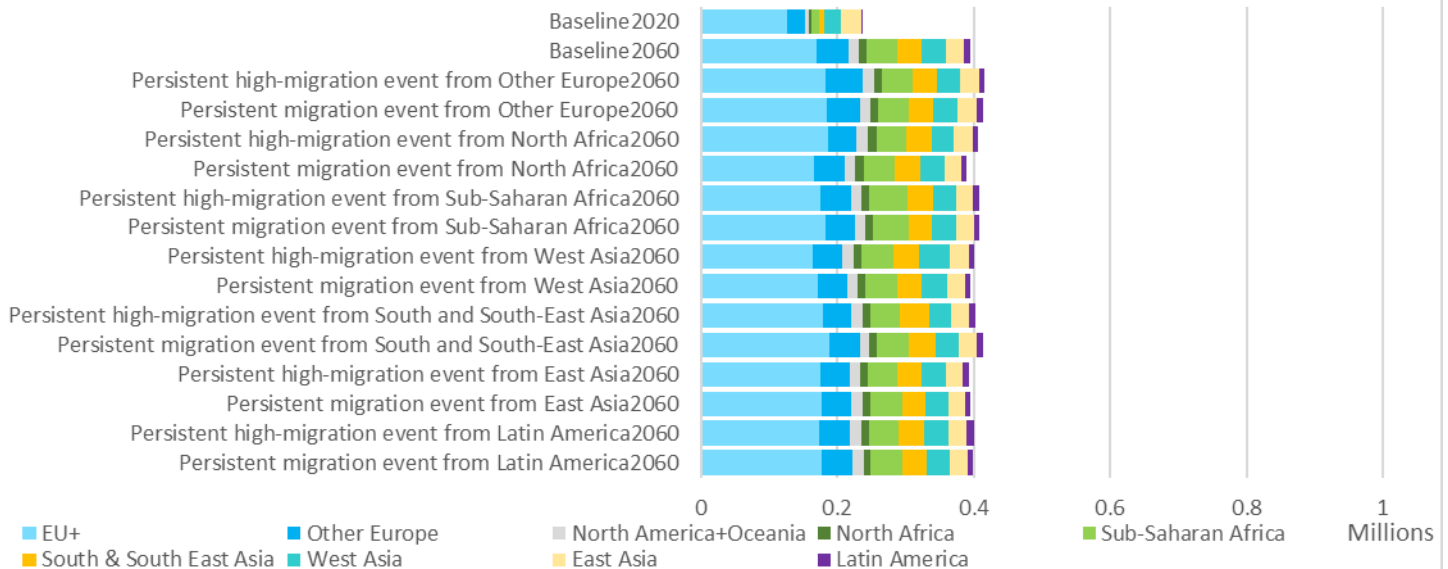
### Bulgaria



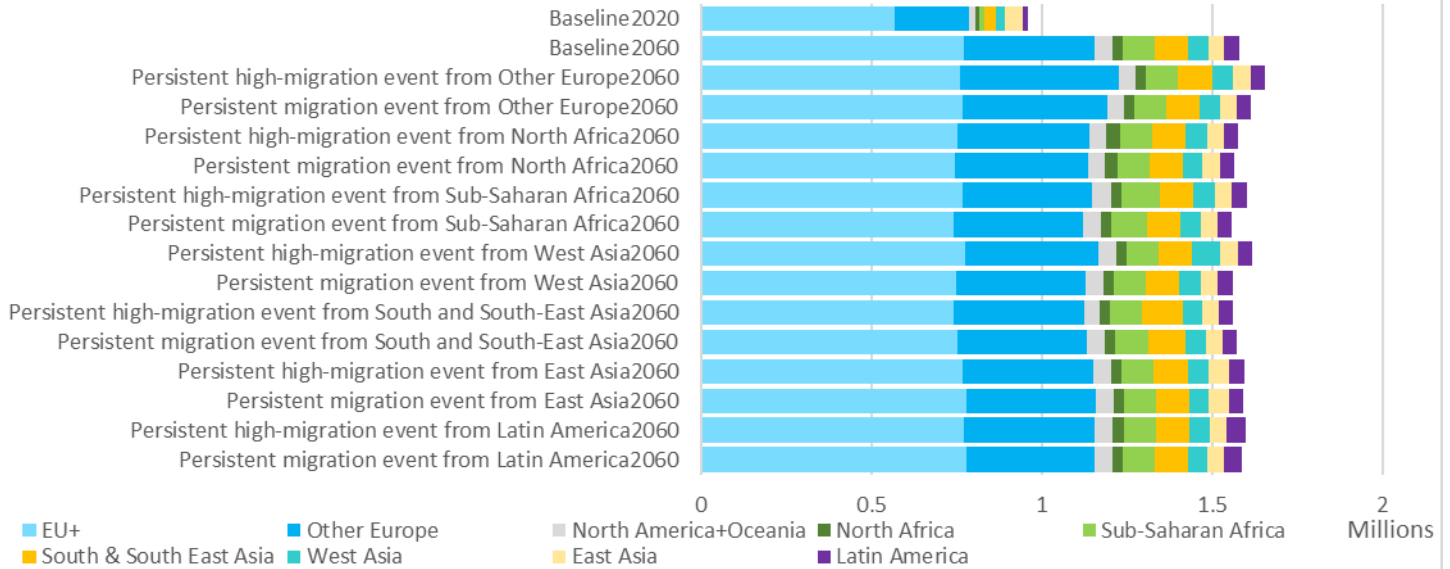
### Croatia



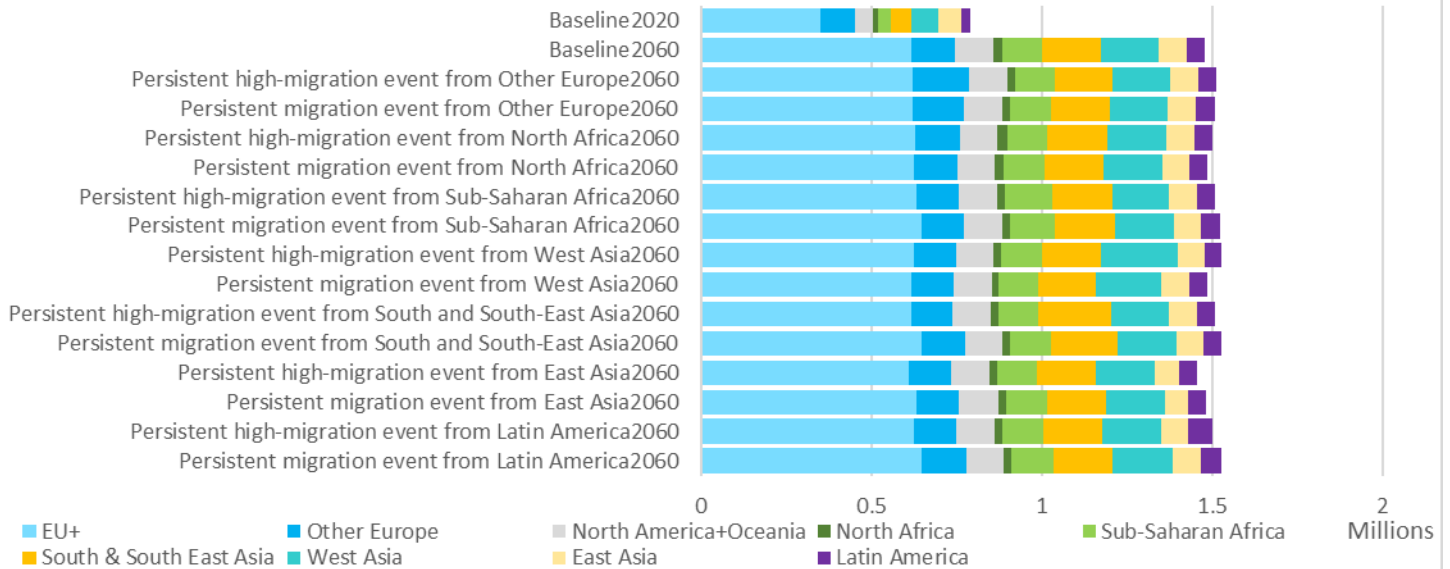
### Croatia



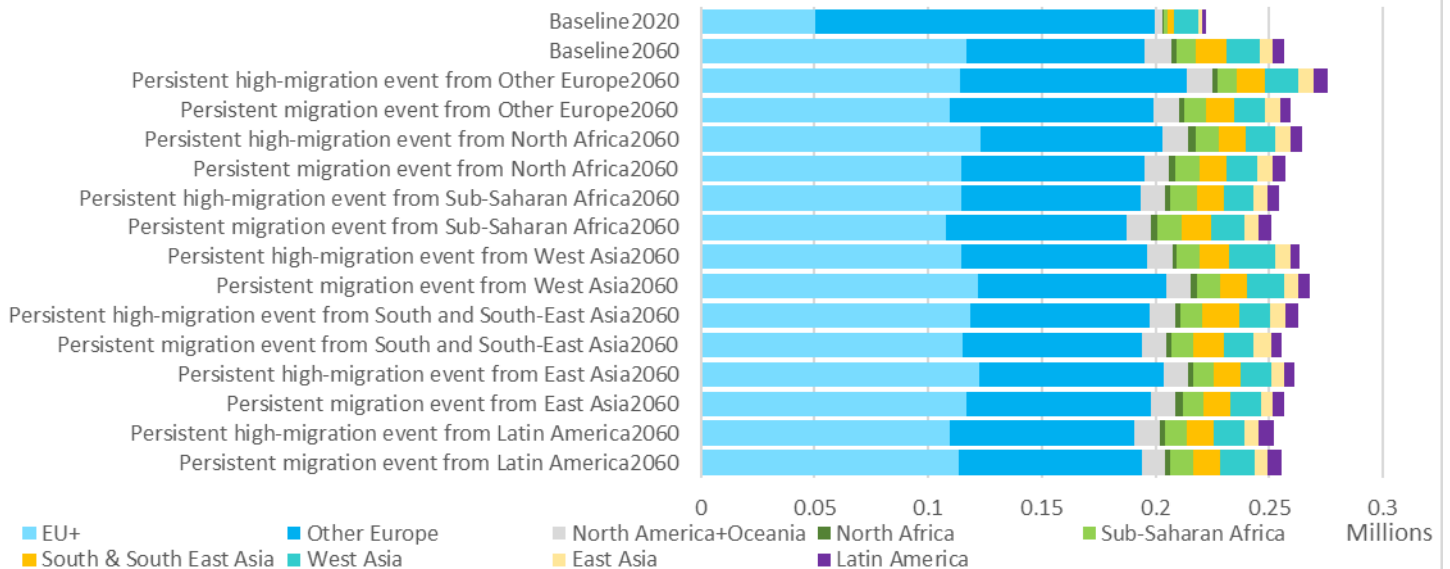
### Czechia



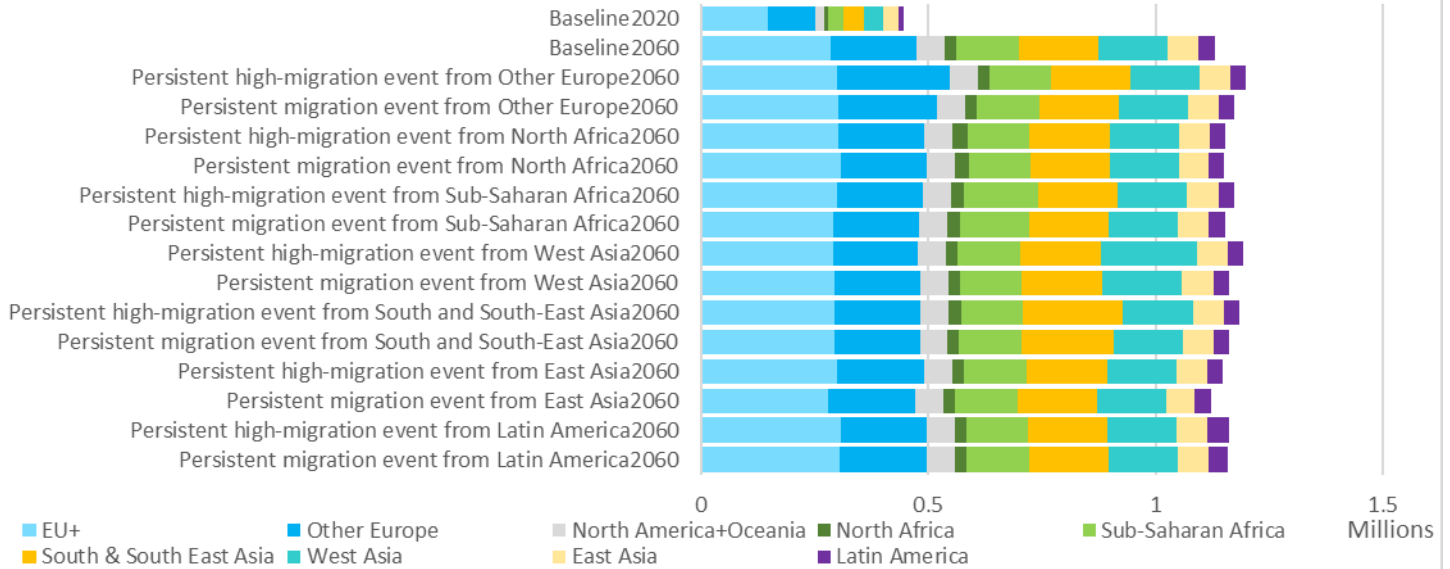
### Denmark



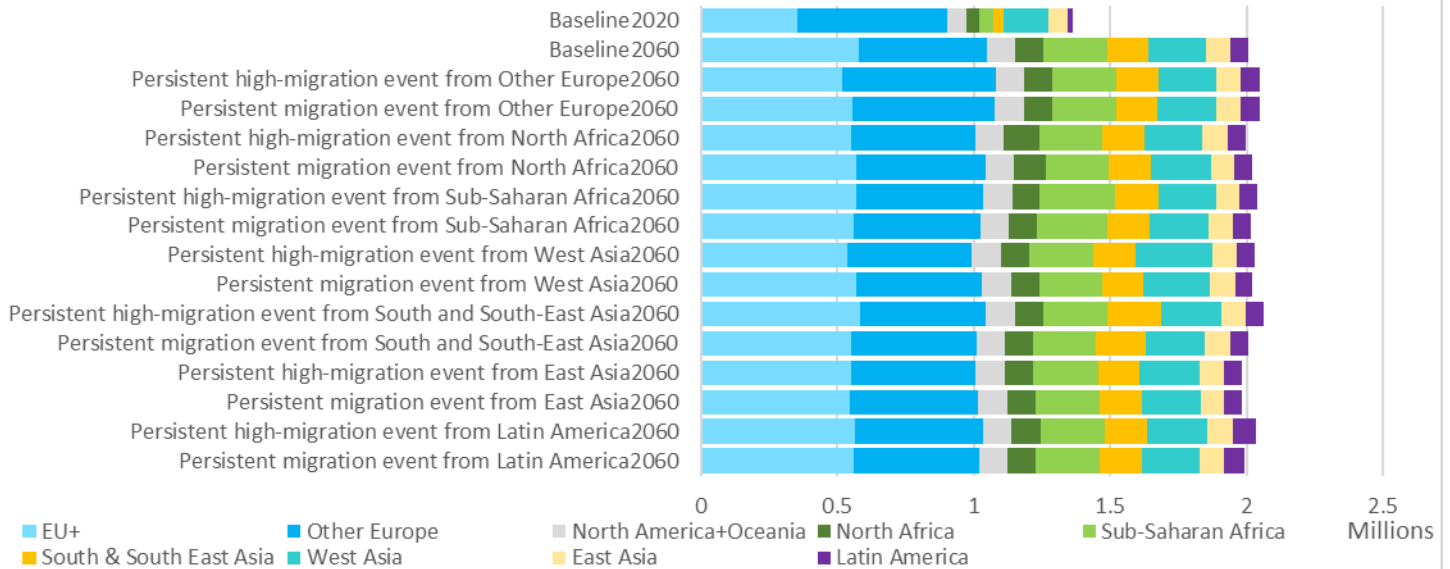
### Estonia



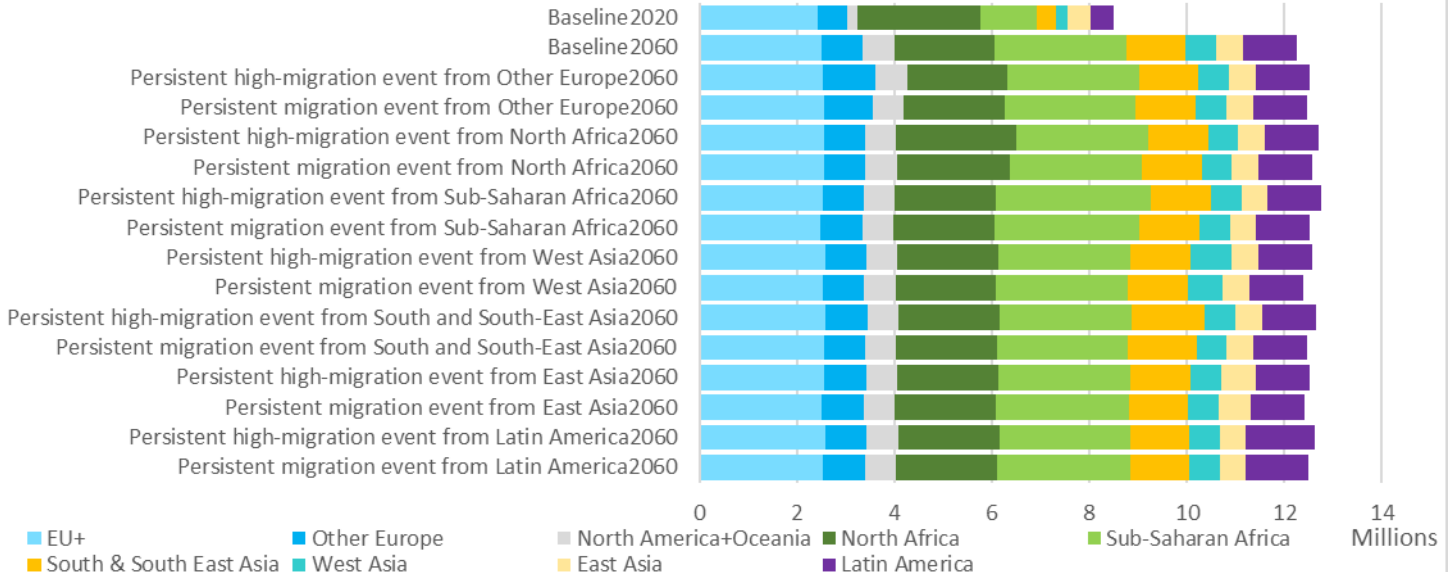
### Finland



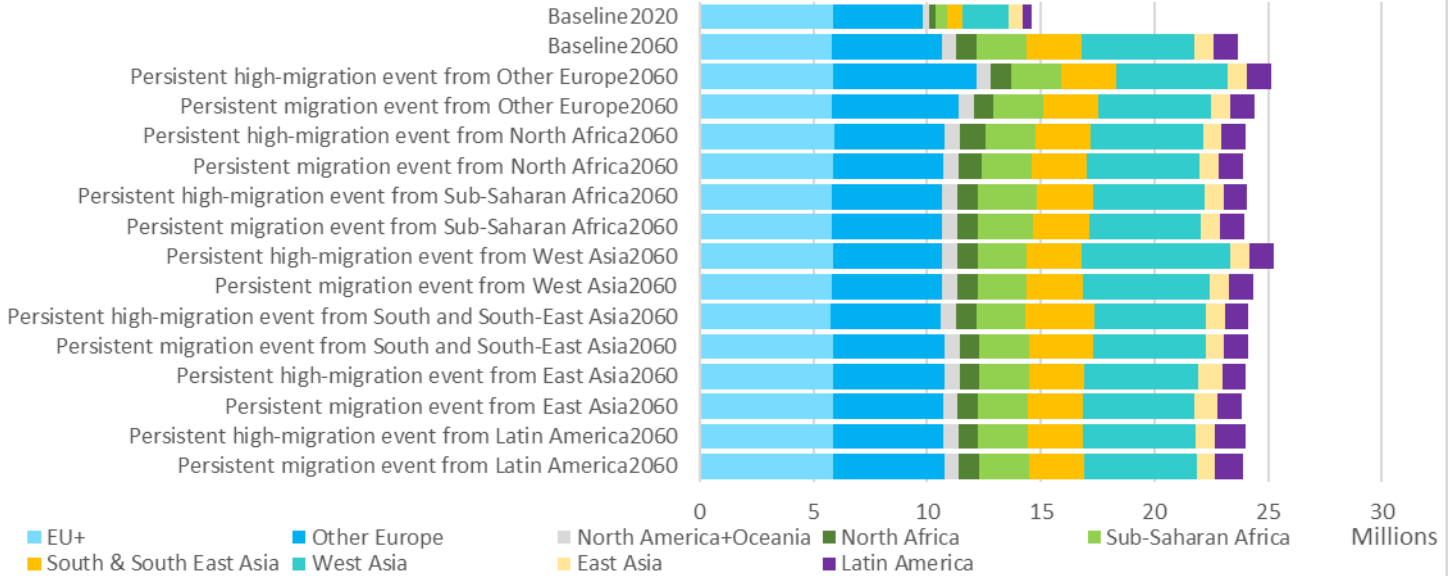
### Greece



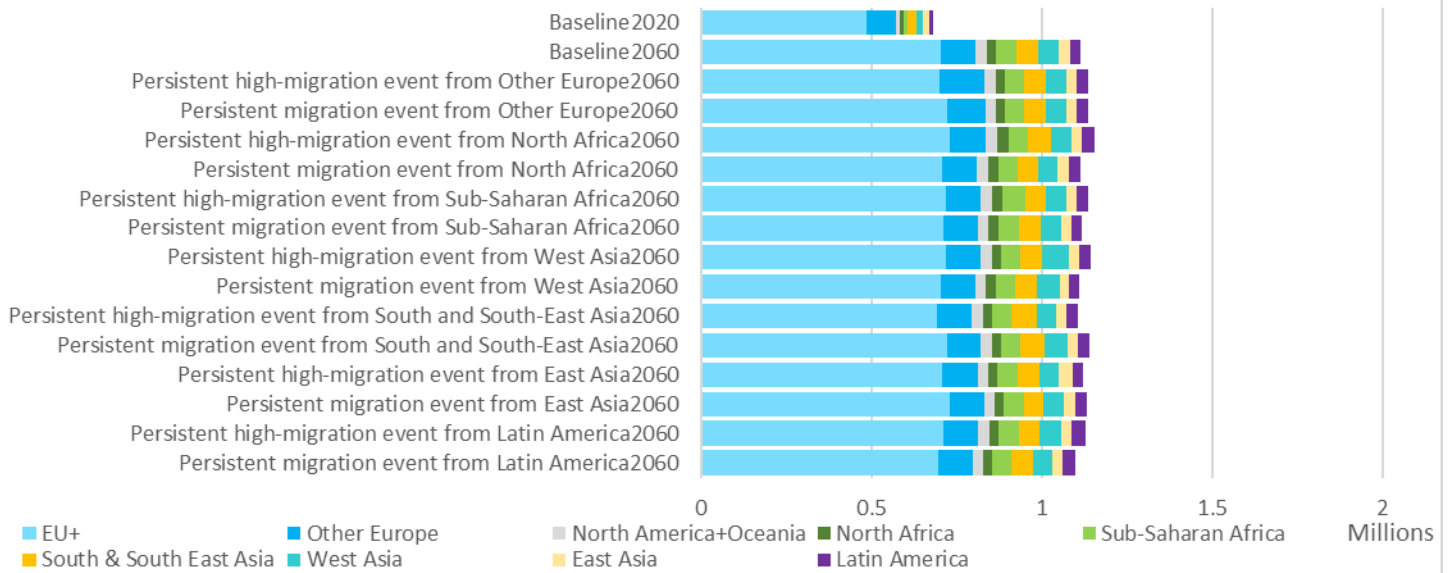
### France



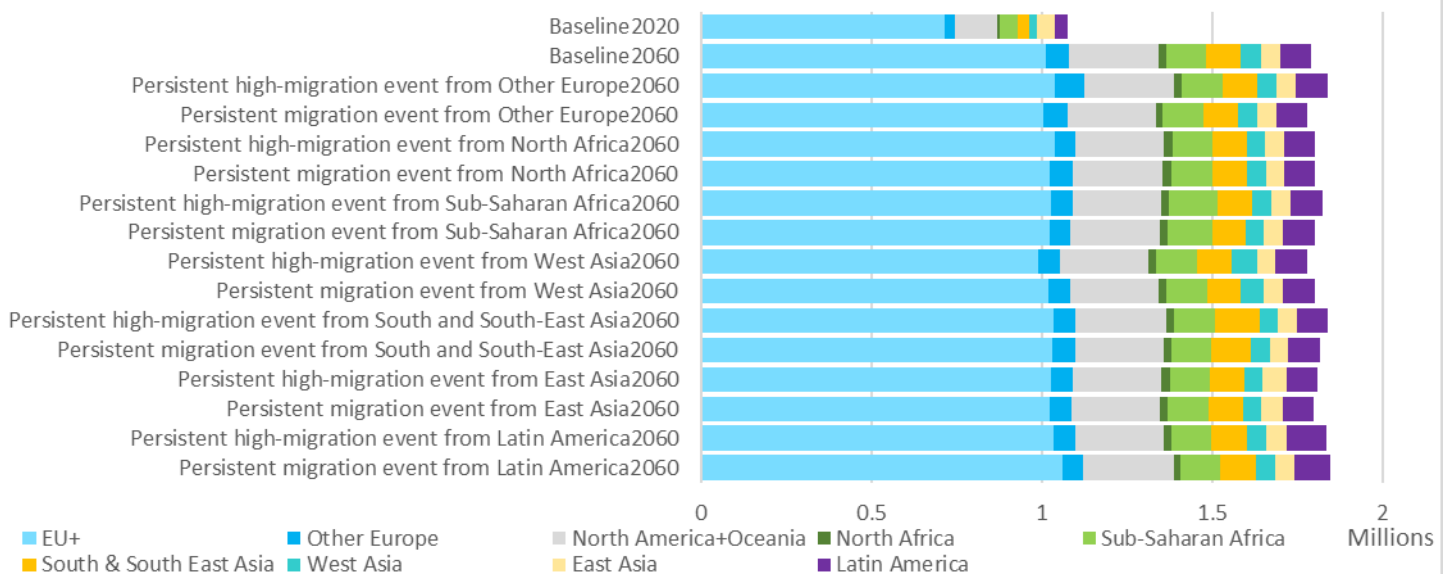
### Germany



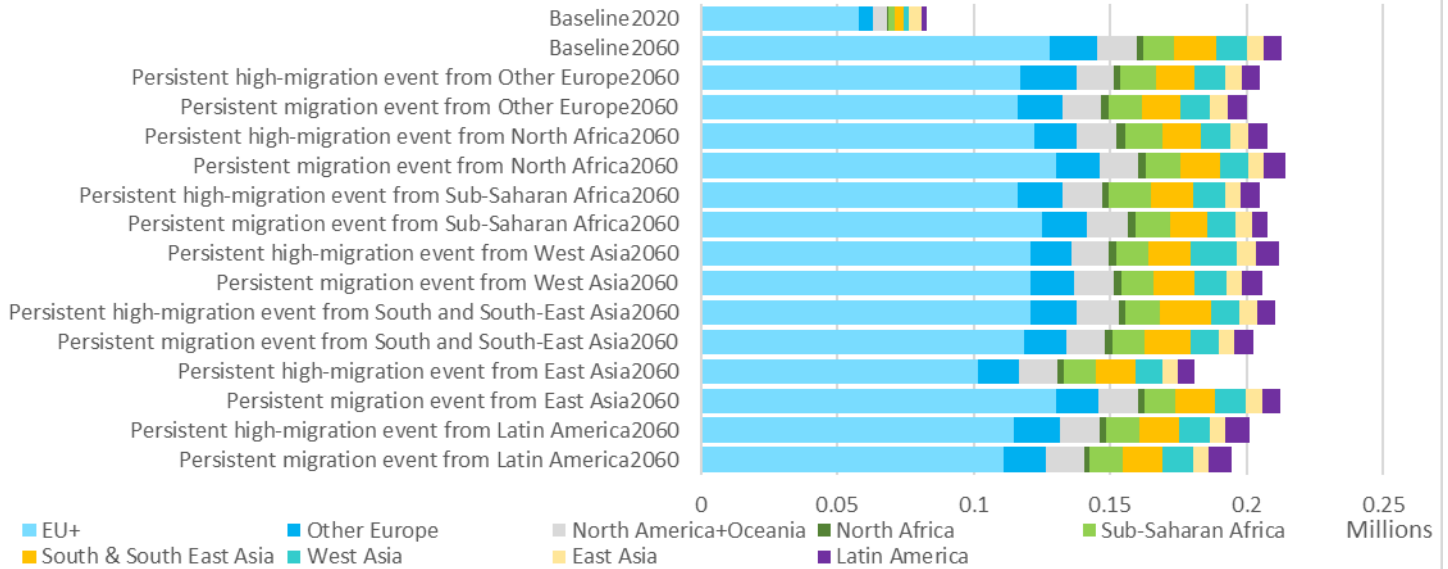
### Hungary



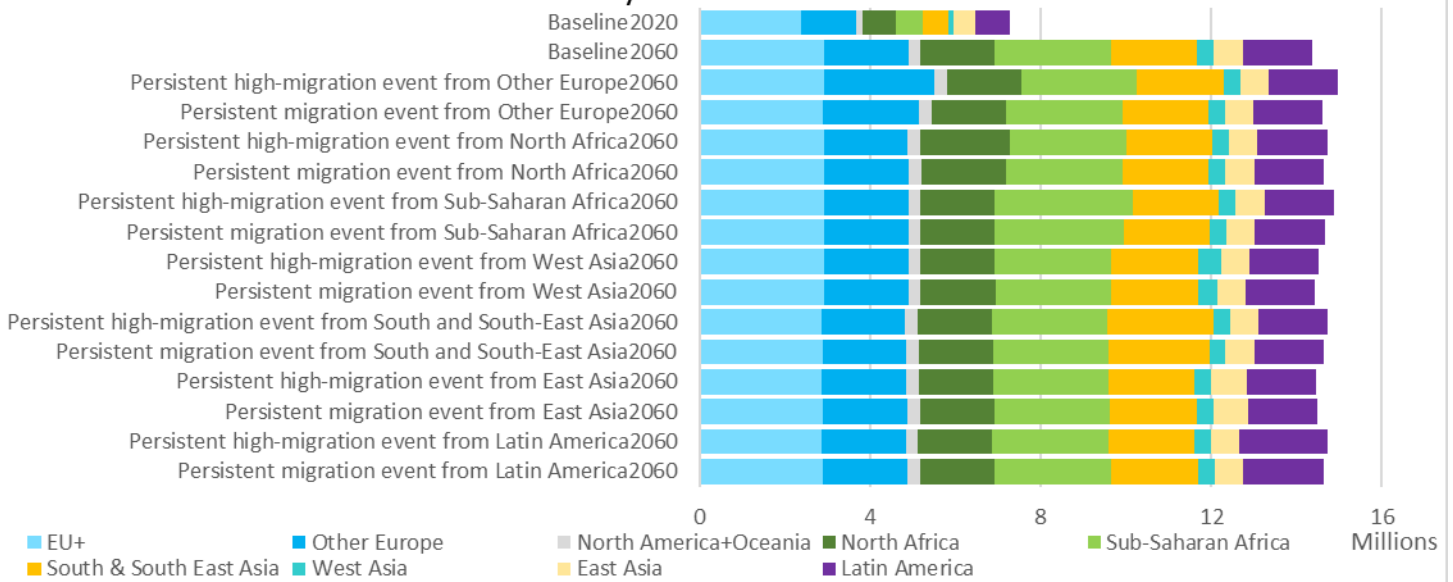
### Ireland



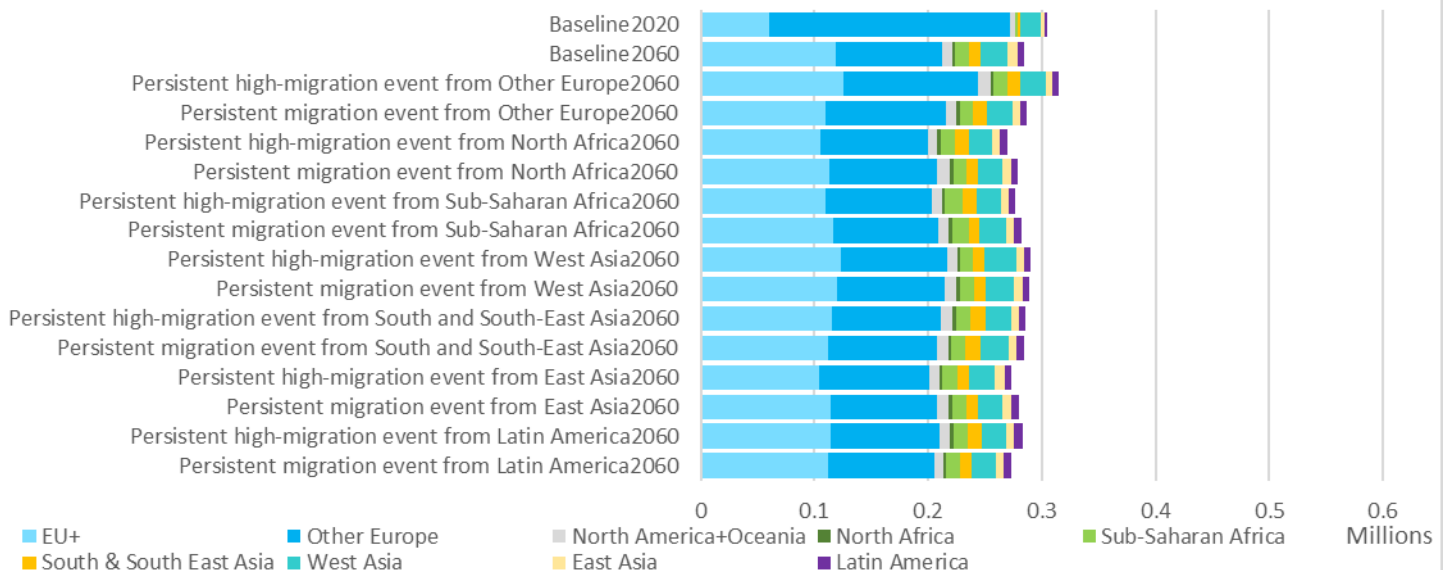
### Iceland



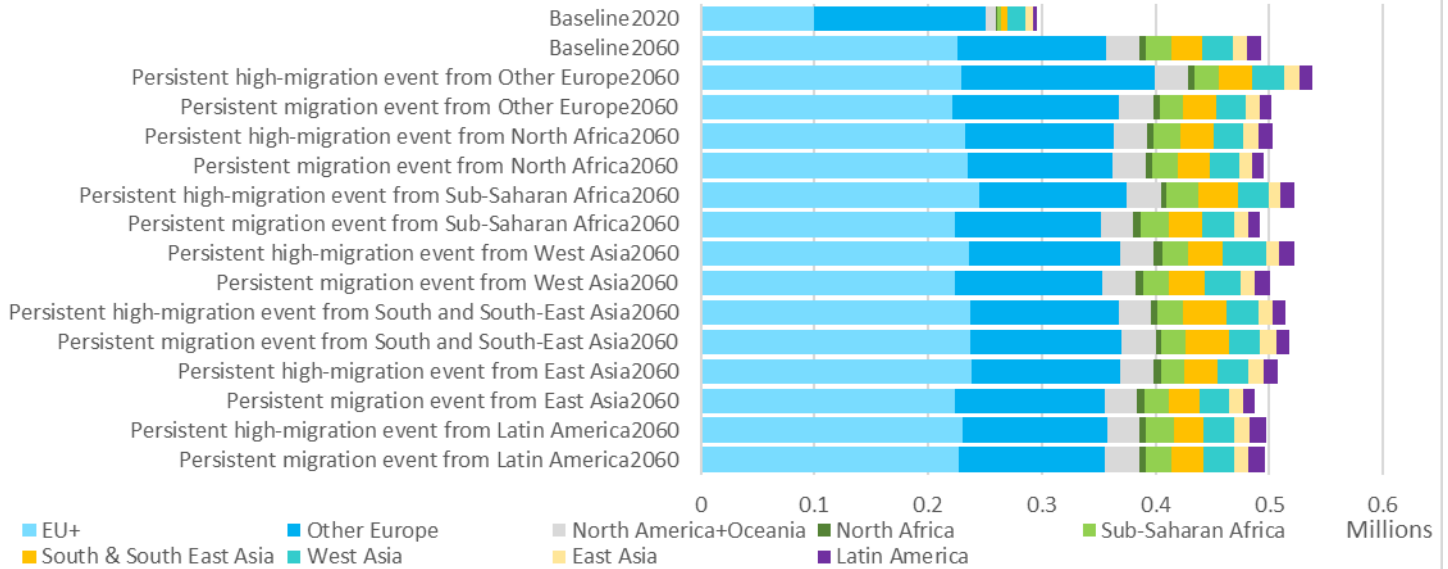
### Italy



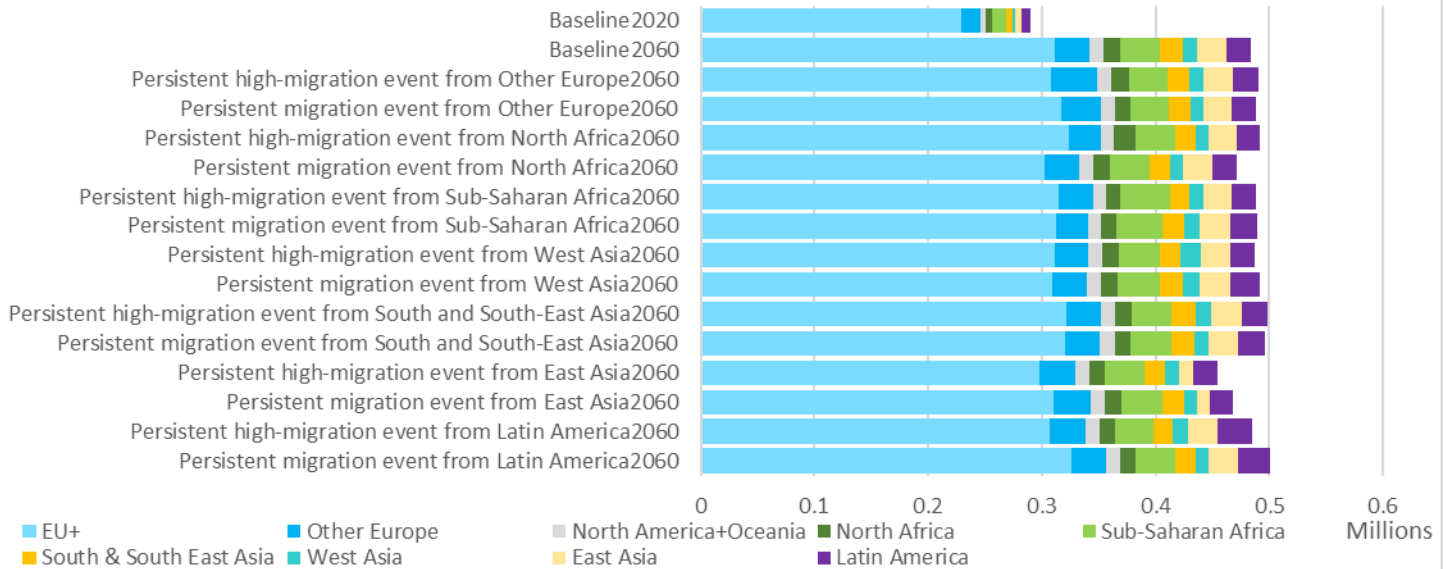
### Latvia



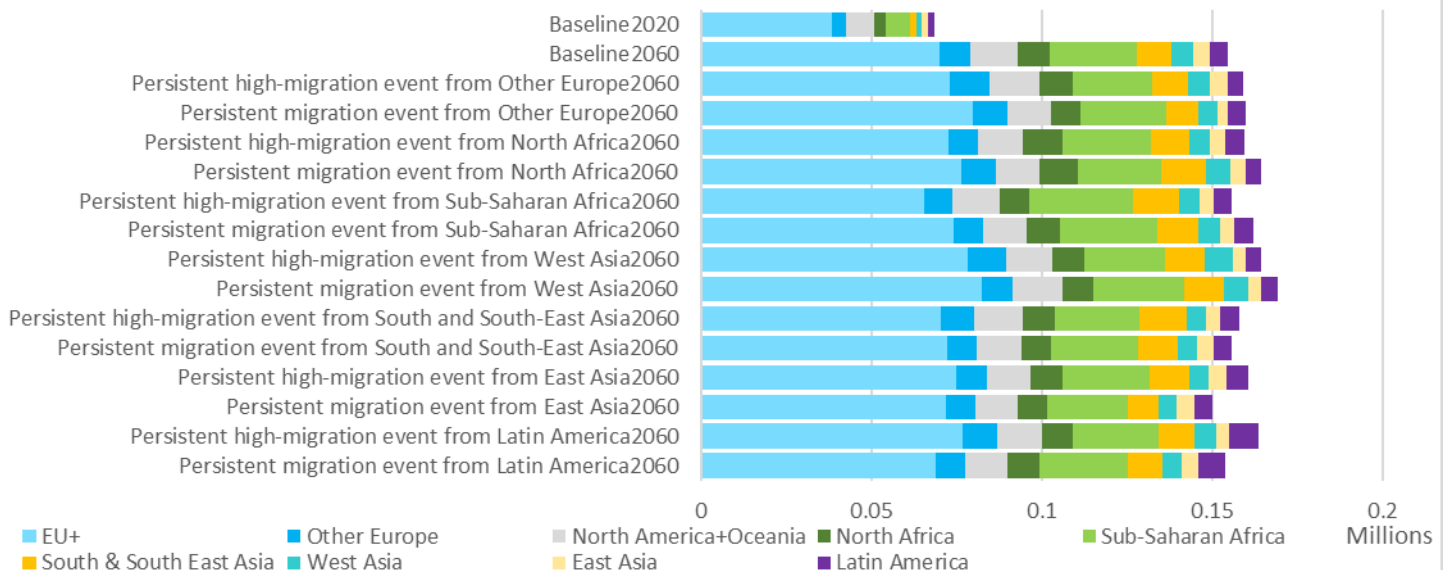
### Lithuania



### Luxemburg

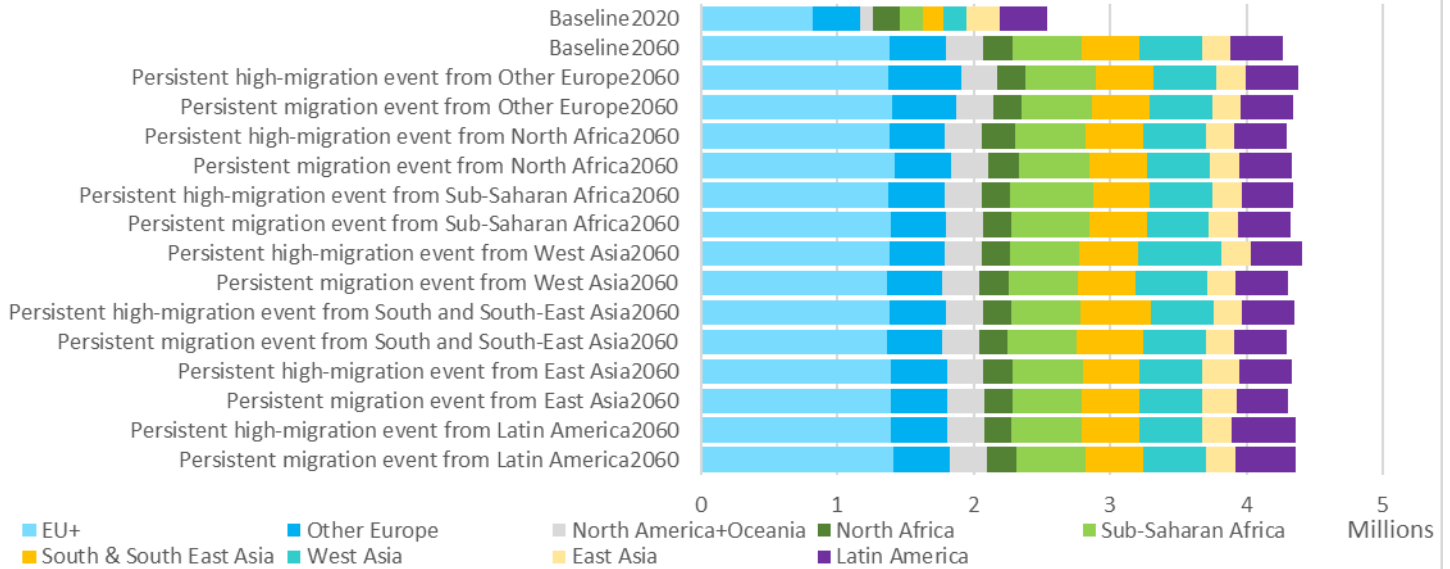


### Malta

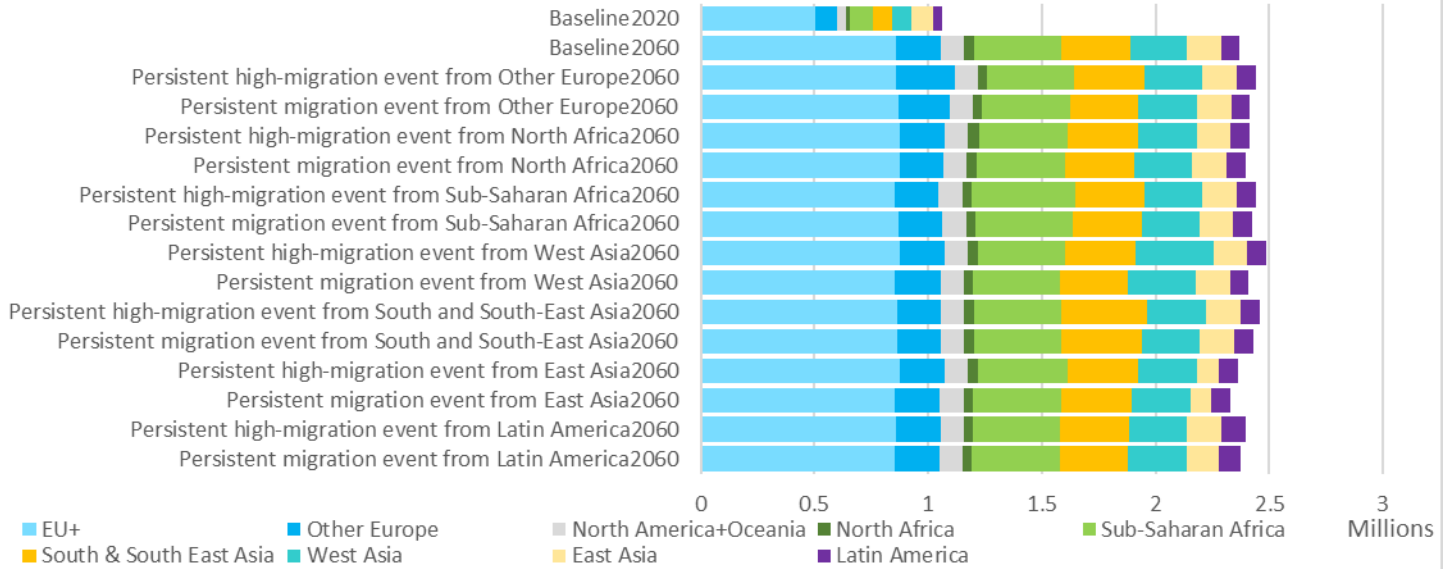




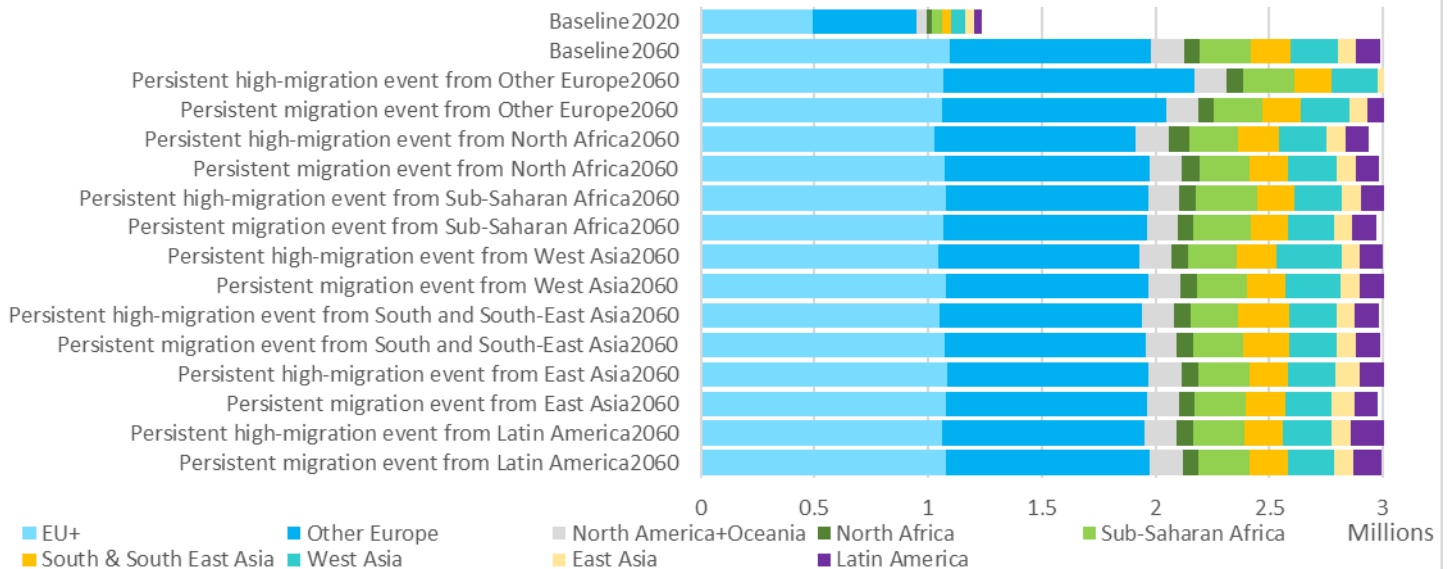
### Netherlands



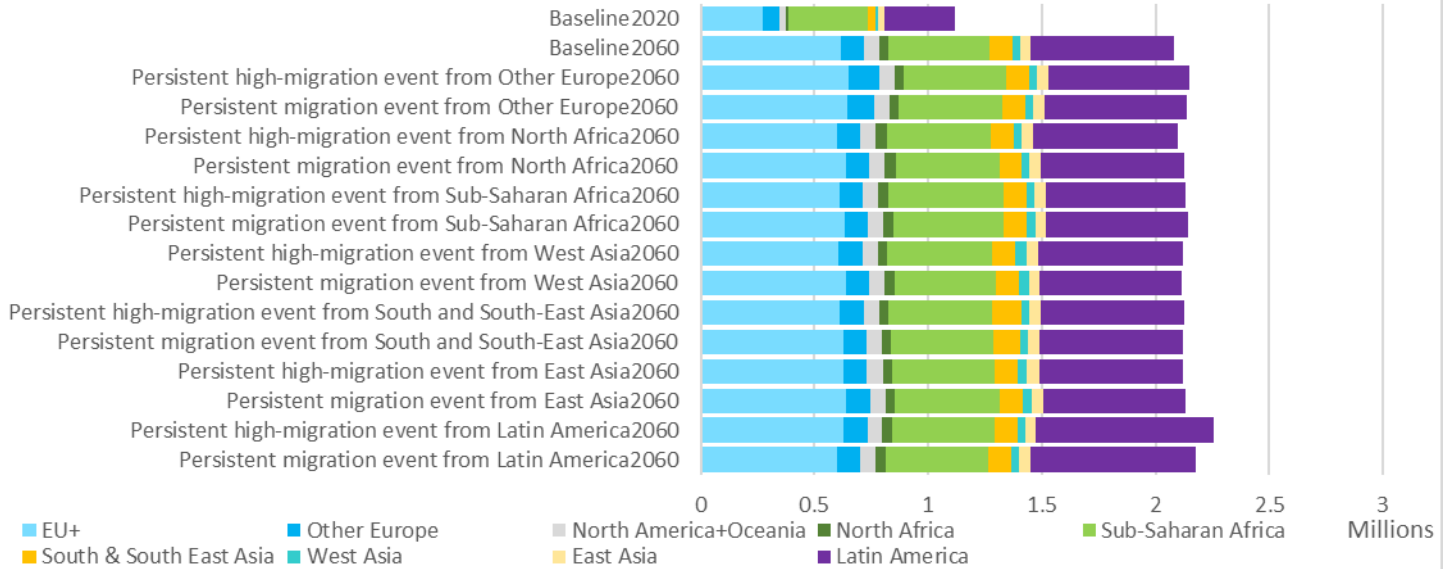
### Norway



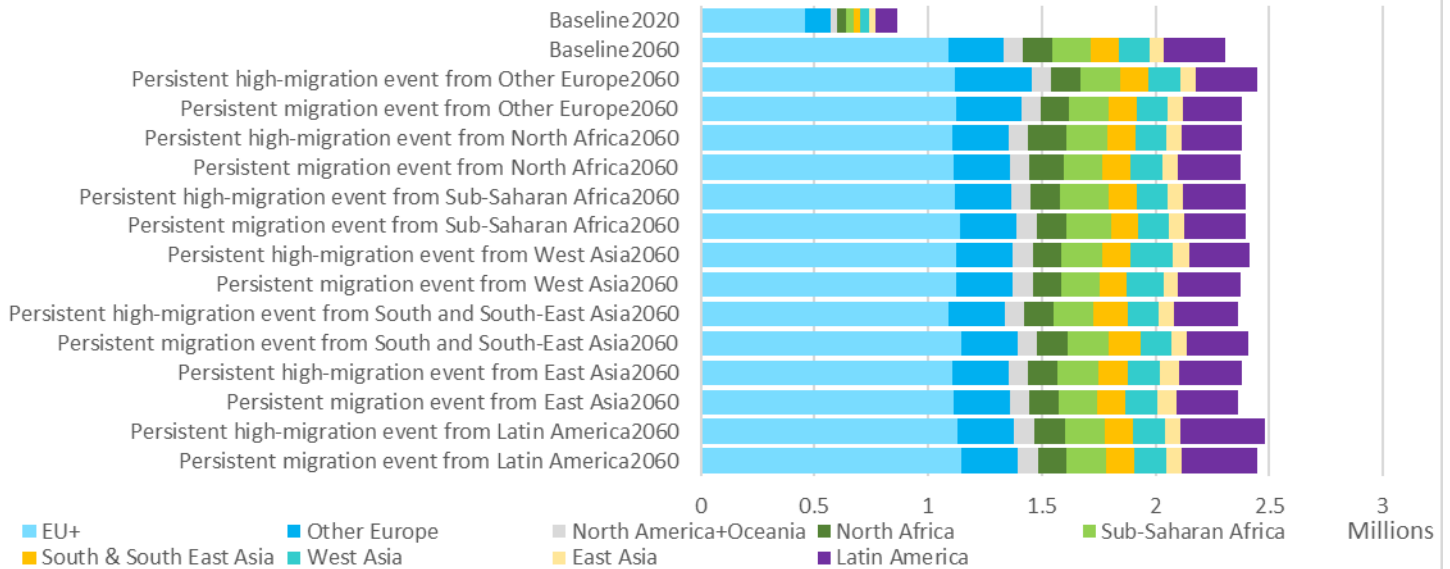
### Poland



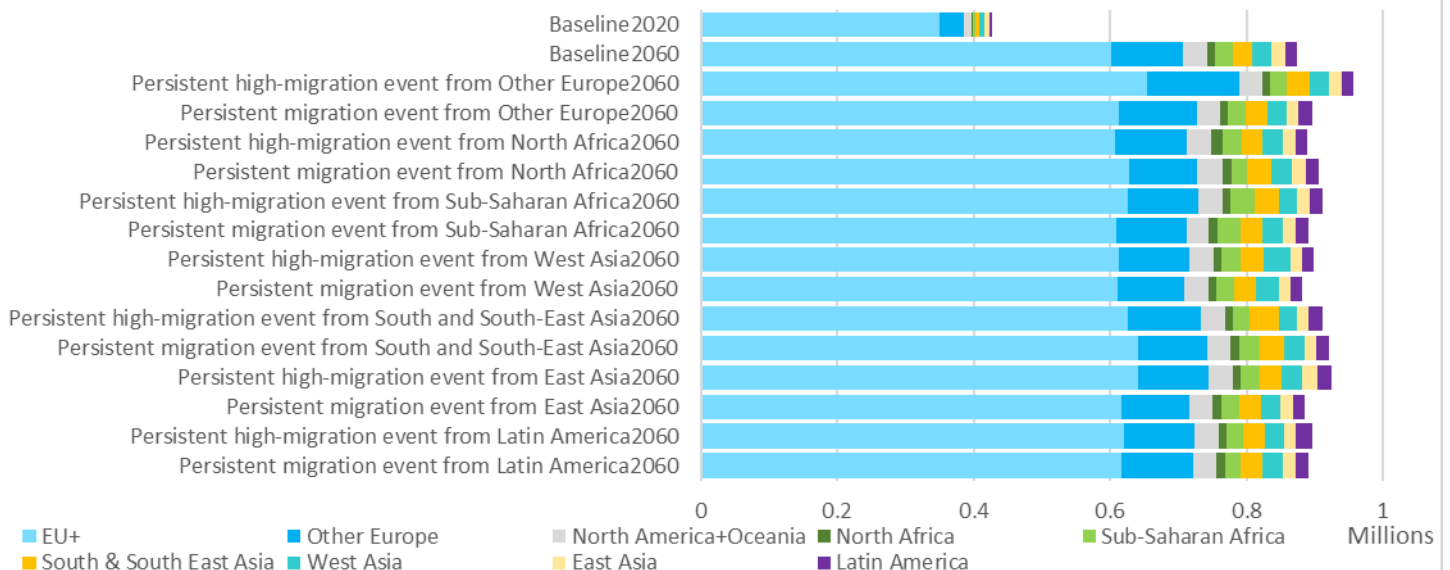
### Portugal



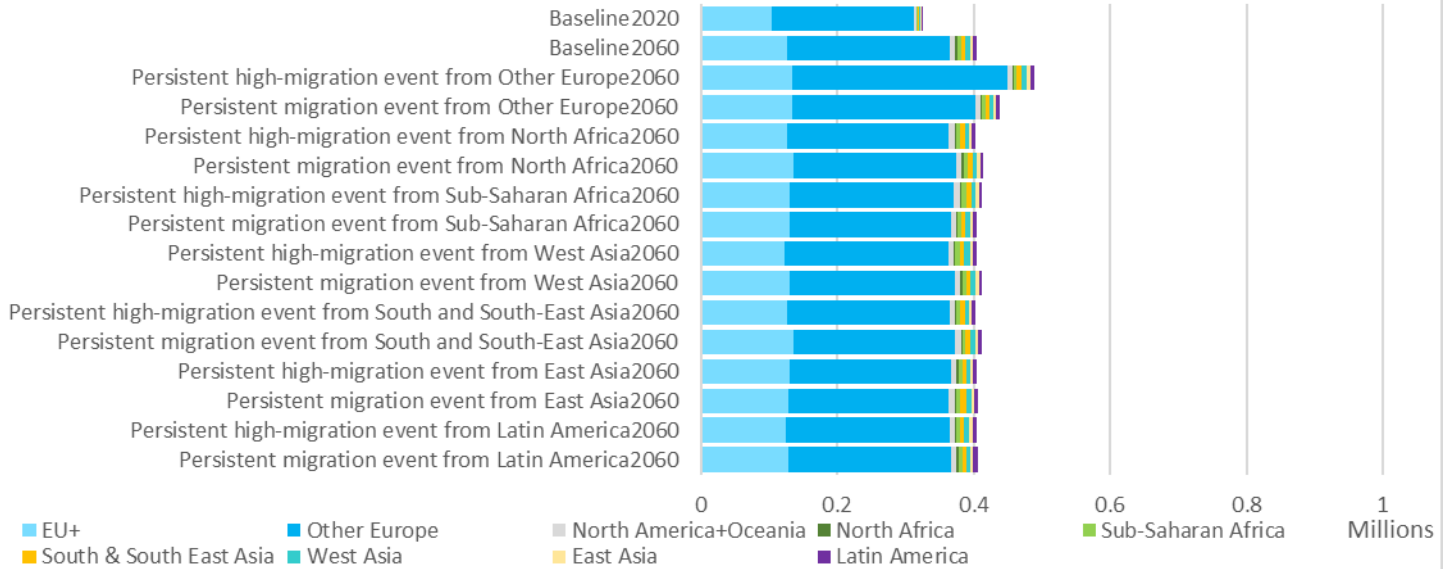
### Romania



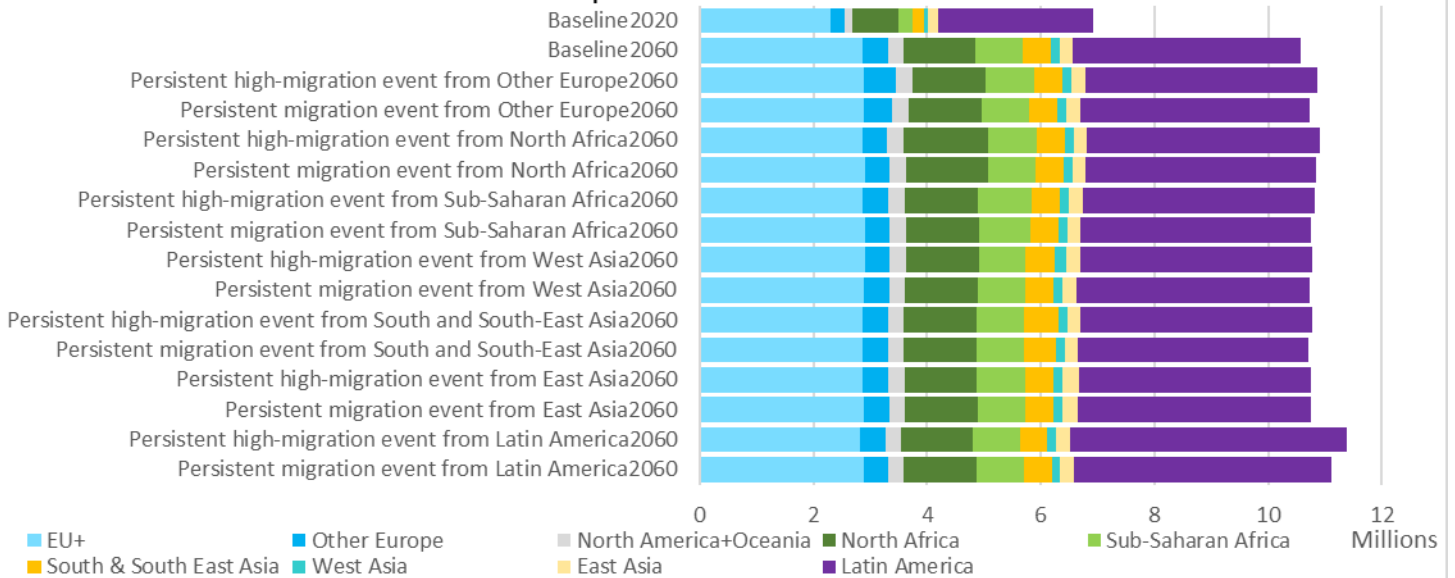
### Slovakia



### Slovenia



### Spain



### Sweden

