

MEM



UCAS

Security marking: PUBLIC

MEM

- Background
- MEM
- Benefits
- Current research
- Developments



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Task:

Create an equality metric to accurately measure disadvantage in higher education

Equality is multidimensional

Parental occupation

POLAR

School performance

Free school meals

ACORN

IMD

Sex

Parental occupation

Care leaver

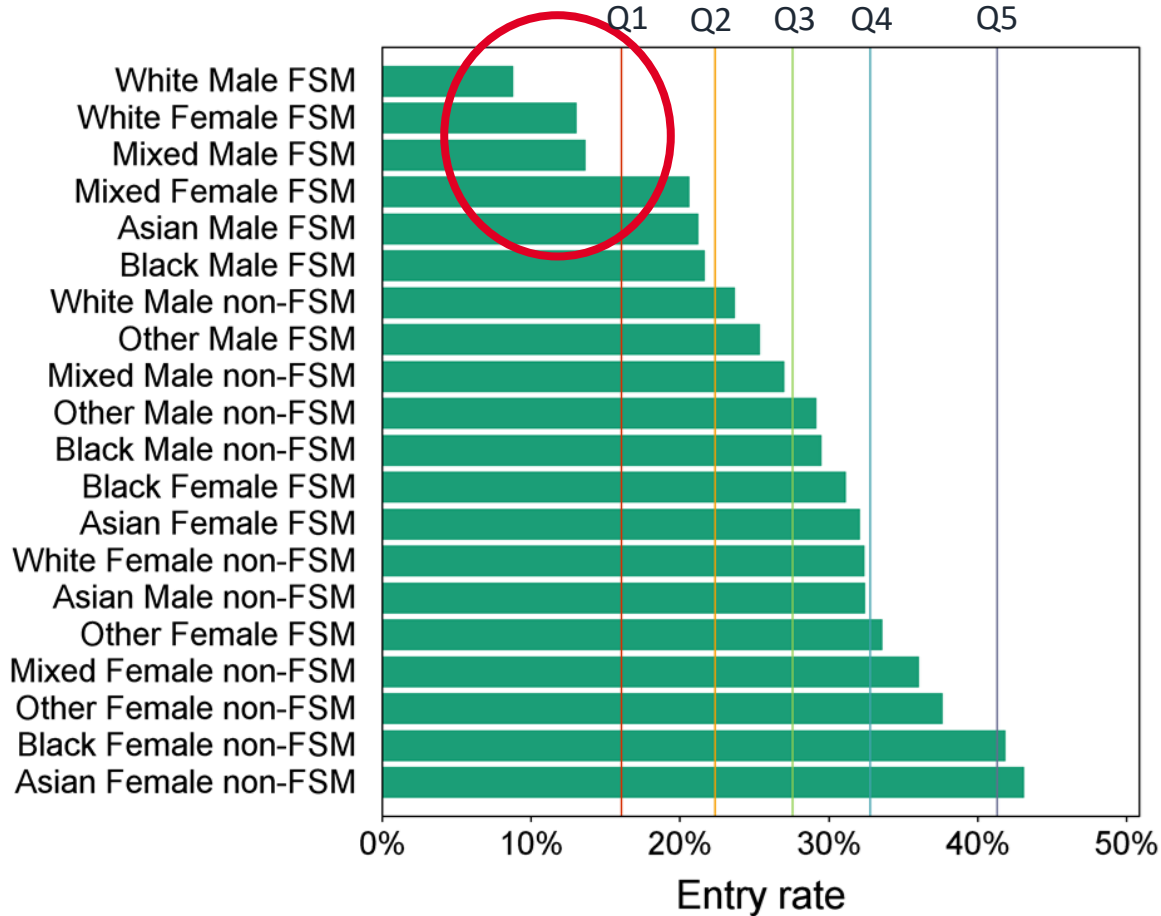
School type

Ethnic group

Religion

Parental HE

Care provider



Avoiding 'blind spots'

- Only considering single dimensions results in blind spots.
- Subgroups of pupils who are highly disadvantaged being missed.

Factors must be considered SIMULTANEOUSLY

Black ethnic group least likely to enter high tariff providers

+





~~Black ethnic group and FSM least likely to enter high tariff providers?~~

FSM students least likely to enter higher tariff providers

WHITE ethnic group and FSM least likely to enter high tariff providers!

Different factors have different impacts

- Low income very unlikely to enter university 
- Care leavers very unlikely to enter university 
- So what if an applicant is from a **low** income background, but **wasn't** in care? And another is from a **high** income household but **WAS** in care
- Are they both as disadvantaged as each other? Does one factor impact more? How should this be measured?



Equality is a multidimensional problem

Multiple factors must be considered to avoid blind spots

Factors must be considered SIMULTANEOUSLY

Different factors have different impacts

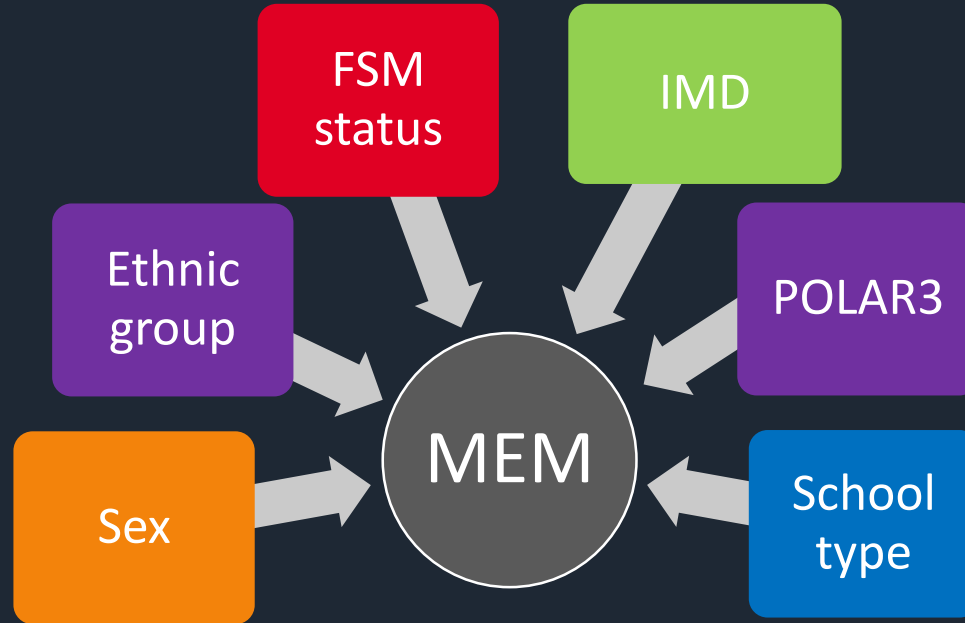
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What is the multiple equality measure (MEM)?

Combines effects of multiple equality measures into a single value (1-5)



How is it made?

Model likelihood of each pupil entering HE based on equality characteristics

Pupil	Gender	School type	POLAR3	Ethnic group	FSM	IMD rank	Modelled likelihood of entering HE	MEM group
A	Female	Independent	Q1	Chinese	No	14,992	49%	5
B	Male	Selective	Q4	Black	No	8,229	23%	3
C	Female	Comp.	Q4	Mixed	Yes	10,504	18%	2
D	Male	Comp.	Q4	White	Yes	6,933	7%	1

Considers multiple background characteristics of an applicant

Considers these characteristics SIMULTANEOUSLY

MEM groups are data driven – weighting of characteristics reflects real life impact on likelihood of entering HE

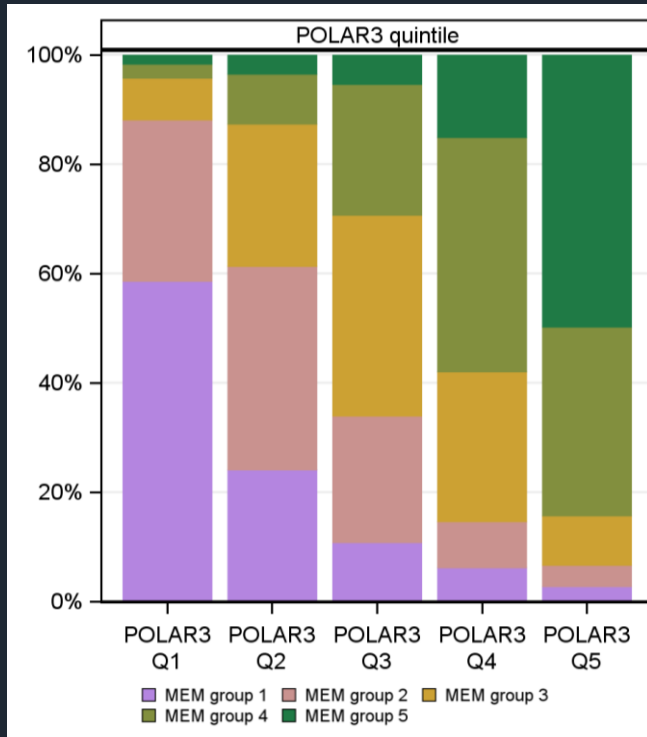
‘Disadvantaged’ is defined by model outcome – those with low likelihoods of entering higher education

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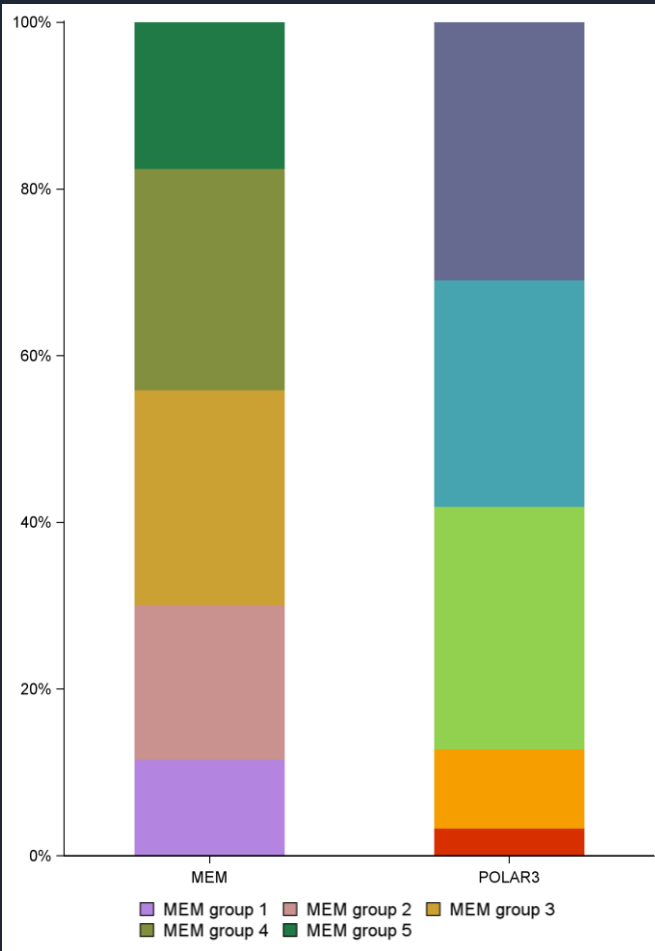
Additional disadvantaged pupils



- MEM identifies broad behaviour of constituent measures, but also picks up subgroups
- Ensures those pupils in the 'blind spots aren't missed'
- 6,720 English applicants in MEM group 1, not in POLAR3 Q1

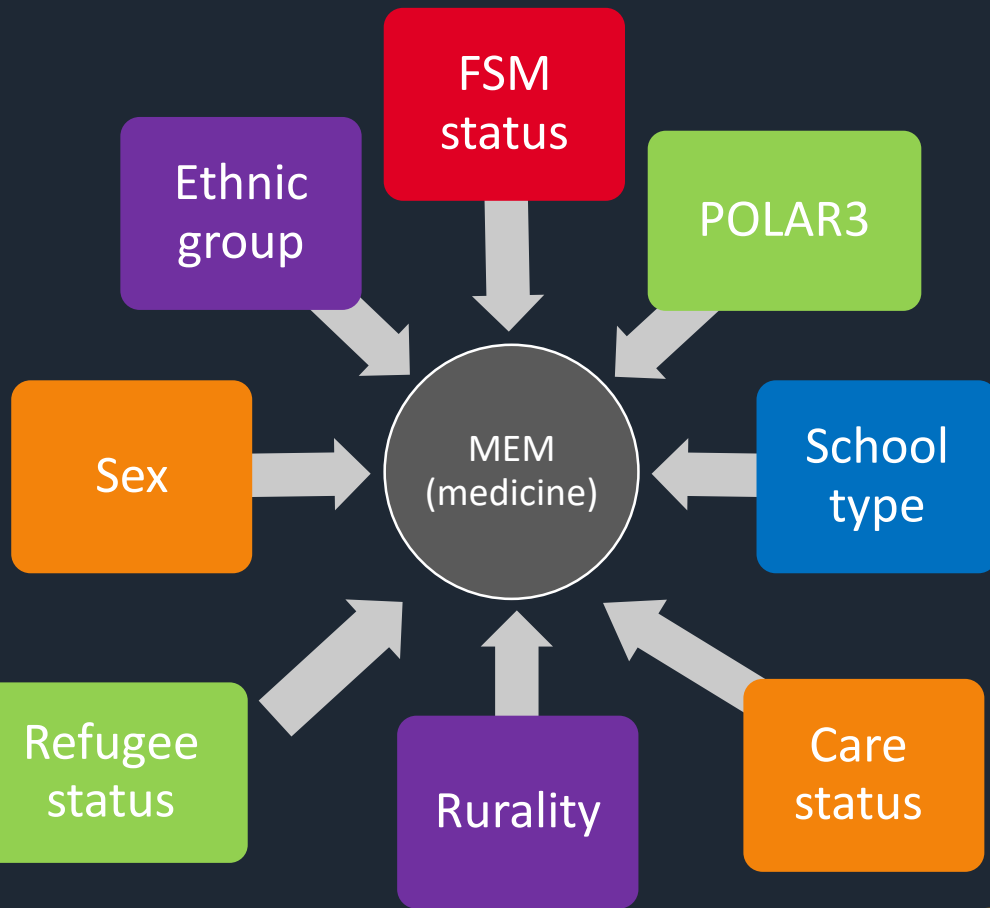
Reduced dependence on geography

- Inclusion of non-geography based measures mean reduced geography dependence
- E.g. 4 times as many London pupils identified as MEM group 1 than POLAR3 Q1
- Useful for providers in low POLAR3 Q1 density areas (e.g. London)



Flexibility

- Change the equality variables that are included in MEM
- Change the level of equality that is investigated
- Ensure MEM targets specific equality issues of interest

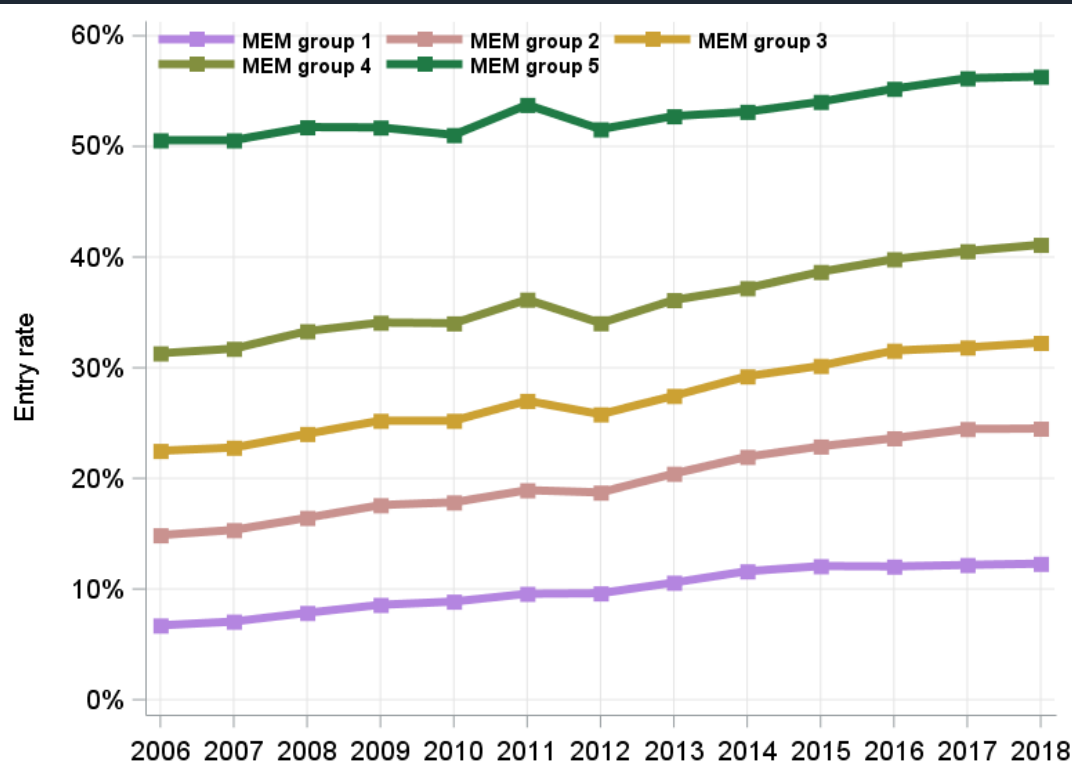


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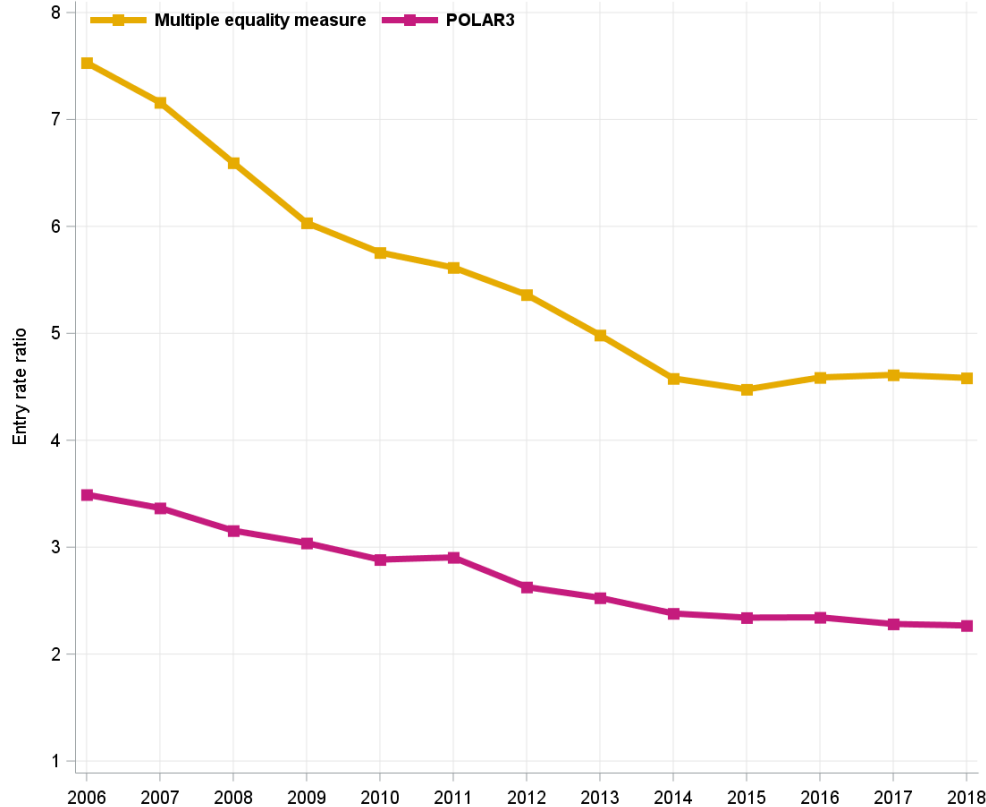


Aggregate level use



- Report entry rates, sector trends
- Wide range of variables can be included
- Use in reporting

Comparison with POLAR3



- In 2018, MEM gap was 4.7 times, on POLAR3 was 2.3
- POLAR3 shows progress being made, MEM shows progress stopped

Individual level use

B	C	D	E	F	G	H	I	J	
Year	Applicant personal ID	Country	Age (country specific school year aligned)	Course code	Primary qualification type	POLAR4 quintile	MEM group	Attainment percentile within background (83-100%)	
2019	1250283029	Scotland	18	PW36	SQA Advanced Higher		3	5	84%
2019	1250520722	England	18	W391	A level		5	5	83%
2019	1250610229	England	18	PW36			5	5	
2019	1342523204	England	18	NN13	A level		5	5	84%
2019	1371009605	England	18	G506			2	3	
2019	1371018407	England	18	N504	A level		4	4	85%
2019	1371019107	England	18	G601			2	1	
2019	1371035402	England	18	M100	A level		4	4	94%
2019	1371037600	England	18	F401	A level		3	4	84%
2019	1371037600	England	18	F413	A level		3	4	84%
2019	1371039606	England	18	H101	A level		3	5	91%
2019	1371045601	England	18	B160	A level		5	5	83%
2019	1371051505	England	18	N100			5	1	
2019	1371073505	England	18	86G3	A level		2	5	85%
2019	1371076403	England	18	PW36			1	2	
2019	1371076403	England	18	W621			1	2	
2019	1371093307	England	18	T6H3			2	3	
2019	1371108409	England	18	N800	BTEC		3	4	85%
2019	1371133506	England	18	W240			5	5	
2019	1371146108	England	18	CD14	A level		4	5	85%
2019	1371146906	England	18	NL31			4	4	
2019	1371149501	England	18	N504	A level		5	5	85%
2019	1371149602	England	18	C889			3	3	
2019	1371149804	England	18	B160	A level		5	5	88%
2019	1371152709	England	18	H100	A level		2	2	92%
2019	1371154806	England	18	M100	A level		2	2	98%
2019	1371163507	England	18	NN41			4	3	
2019	1371167701	England	18	846W	BTEC		2	3	94%
2019	1371174800	England	18	F413	A level		4	5	
2019	1371182104	England	18	N100	A level		5	5	
2019	1371206701	England	18	M100	A level		1	2	83%

- Contextual admissions (MCDS)
- Restricted variables to be included
- UCAS form variables

MEM

Contextual data

Individual level

GDPR
Timely supply

Sex
POLAR3
School type
IMD

Reporting

Aggregate level

Accuracy

Sex
POLAR3
School type
IMD
Ethnic group
FSM

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Developments

- Engagement with policy making stakeholders to emphasise the benefits of MEM e.g. DfE, OfS etc.
- Speaking to Scotland, Wales and Northern Ireland to access data required for country-specific MEMs
- Apply MEM principles to adjustment of grades for contextualisation
- Increase data access to add to metrics included
- Integrate MCDS and UCAS' contextual data service to create one single, integrated service

Discussion

- Do you feel awareness of MEM is growing in the sector?
- How do you currently use MEM? E.g. reporting, retrospective analysis, targeting, marketing or contextual decision-making
- What (if any) barriers are there to your adoption of MEM?
- How could UCAS support you to further adopt MEM?